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THESIS

DEFENSE SECTOR CONSOLIDATION: WILL CONSOLIDATION WITHIN THE DEFENSE SECTOR IMPROVE THE FINANCIAL PERFORMANCE OF DEFENSE CONTRACTORS WHILE, SIMULTANEOUSLY YIELDING COST SAVINGS TO TAXPAYERS?

by

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December 2005

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The end of the Cold War brought with it reductions in defense spending, and a realization by many firms that a paradigm shift needed to occur within the defense industry. The defense sector had severe overcapacity, and needed to be consolidated. As defense sector consolidation was taking place, serious questions began to arise. What would happen to the defense industrial base? Would the DoD be required to pay higher prices for goods and services? Would there be an income transfer from taxpayers to shareholders?

Very Large, defense focused conglomerates were/are being formed, increasing the bargaining position of the few firms that remain in the market. As the single customer for many products of the defense industry, DoD must have the ability to identify and address potential harmful effects of mergers and acquisitions. The purpose of this thesis is to determine whether consolidation activity within the defense sector yields positive net benefits for shareholders, and more importantly its effect on taxpayers.

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ABSTRACT

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TABLE OF CONTENTS

I. INTRODUCTION....1
- A. BACKGROUND....1
- B. PURPOSE....1
- C. BENEFITS OF THE RESEARCH....1
- D. RESEARCH OBJECTIVE....2
  - 1. Second Order Objectives....2
- E. SCOPE....2
- F. METHODOLOGY....3
- G. RESEARCH QUESTIONS....3
- H. ORGANIZATION OF THE THESIS....4
- I. RESEARCH APPLICATION....4

II. THE COLD WAR REVISITED....5
- A. INTRODUCTION....5
- B. A RACE FOR ARMS....5
- C. THE END OF THE COLD WAR....8
- D. THE COST OF THE COLD WAR....9

III. FUNDAMENTAL REASONS BEHIND MERGER AND ACQUISITION ACTIVITY....11
- A. WHY DO FIRMS ENGAGE IN MERGER AND ACQUISITION ACTIVITY?....11
  - 1. Synergy....11
  - 2. Varieties of Mergers....12
  - 3. Acquisitions....13
- B. HOW DO YOU VALUE AN ACQUISITION CANDIDATE?....14
  - Synergy: The Premium for Potential Success....15
  - What to Look For....15
- C. DOING THE DEAL....16
  - 1. The Acquirer's Offer....16
  - 2. The Target's Response....16
  - 3. Closing the Deal....17
- D. THE NEED FOR STAKEHOLDER ANALYSIS....18
  - 1. What is Stakeholder Analysis?....18
  - 2. Who is a Stakeholder?....19
  - 3. Which Stakeholder Characteristics are Analyzed?....19
  - 4. Major Steps in Stakeholder Analysis....20
  - 5. Stakeholder Analysis Applied to the DoD....20
- E. WHY MERGERS AND ACQUISITIONS FAIL....22
  - 1. Flawed Intentions....22
  - 2. The Obstacles to Making the Deal Work....23

IV. REGULATIONS GOVERNING MERGERS AND ACQUISITIONS....25

A. 1992 HORIZONTAL MERGER GUIDELINES....................................25
1. Market Definition, Measurement and Concentration....................26
a. Product Market Definition..*26*
2. The Potential Adverse Competitive Effects of Mergers................29
3. Entry Analysis...31
4. Efficiencies...31
5. Failure and Exiting Assets...*32*
B. NON-HORIZONTAL MERGER GUIDELINES....................................33
1. Elimination of Specific Potential Entrants.................................34
a. Theory...*34*
2. Competitive Problems from Vertical Mergers..............................35
V. OPERATING PERFORMANCE OF DEFENSE FIRMS ENGAGED IN MERGER AND ACQUISITION ACTIVITY...37
A. INTRODUCTION...37
B. METHODS OF COMPUTATION..37
C. RESULTS OF ANALYSIS: WHAT THE DATA TELLS US..................39
1. Operating Performance..41
a. Defense Sector Operating Performance [Refer to Table 12 & Table 13 titled "DEFENSE INDUSTRY FINANCIAL PERFORMANCE"]...*42*
2. Capital Gains Performance [Refer to Table 6 & Table 11 in the Appendix]...42
D. EFFECTS OF DEFENSE SECTOR CONSOLIDATION ON TAXPAYERS...43
Government Accountability Office (GAO) Studies on Defense Restructuring Costs...44
VI. CONCLUSIONS AND RECOMMENDATIONS..................................47
A. INTRODUCTION...47
B. CONCLUSIONS AND SUMMARY...47
C. RECOMMENDATION...49
D. AREAS OF FURTHER RESEARCH...50
APPENDIX..51
LIST OF REFERENCES..93
INITIAL DISTRIBUTION LIST...97

LIST OF FIGURES

Figure 1. Defense Spending Trend 1980 – 2004 10
Figure 2. Lockheed Martin (LMT) Relative Price Trend from 1990 – 2005 87
Figure 3. Boeing (BA) Relative Price Trend from 1990 – 2005 88
Figure 4. General Dynamics (GD) Relative Price Trend from 1990 – 2005 88
Figure 5. Goodrich (GR) Relative Price Trend from 1990 – 2005 89
Figure 6. Northrop Grumman (NOC) Relative Price Trend from 1990 – 2005 90
Figure 7. Raytheon (RTN) Relative Price Trend from 1990 – 2005 90
Figure 8. L-3 Communications (LLL) Relative Price Trend from 1990 – 2005 91
Figure 9. Alliant Techsystems (ATK) Relative Price Trend from 1990 – 2005 91

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LIST OF TABLES

Table 1. What $8 trillion can Buy 10
Table 2. Influence-Interest Matrix 19
Table 3. Stakeholder Table 20
Table 4. Defense Sector Stakeholder Table 21
Table 5. Merger & Acquisition Database 40
Table 6. Average Annual Capital Gains from September 1990 – September 2005 43
Table 7. Discretionary Outlays 51
Table 8. Monthly Stock Market Return 52
Table 9. Quarterly Stock Market Returns 56
Table 10. Sample Group Average Quarterly Stock Market Return 58
Table 11. Annual Stock Market Returns from 1990 – 2005 60
Table 12. Sample Group Growth in Operations as a Result of M & A Activity 61
Table 13. Defense Industry Financial Performance 63

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LIST OF ACRONYMS

ATK	Alliant Techsystems
BA	Boeing Co.
CEO	Chief Executive Officer
DCF	Discounted Cash Flow
DCMA	Defense Contract Management Agency
DoD	Department of Defense
DoJ	Department of Justice
DSB	Defense Science Board
EV	Enterprise Value
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
FMS	Foreign Military Sales
FTC	Federal Trade Commission
GAO	Government Accountability Office
GD	General Dynamics
GDP	Gross Domestic Product
GR	Goodrich Corp.
H-Bomb	Hydrogen Bomb
HHI	Herfindahl-Hirschman
HHS	Health and Human Services
IRS	Internal Revenue Service
LLL	L-3 Communications Holdings
LMT	Lockheed Martin
M&A	Mergers and Acquisitions
NGO	Non-Governmental Organization
NOC	Northrop Grumman
NSC	National Security Council
P/E	Price-to-earnings
P/S	Price-to-sales

RTN	Raytheon Co.
S&P	Standard & Poor's
SEC	Securities and Exchange Commission
START	STrategic Arms Reduction Treaty
USSR	Union of Soviet Socialist Republics
WACC	Weighted Average Cost of Capital

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I. INTRODUCTION

A. BACKGROUND

Faced with budgetary constraints, and increased public scorn as a result of the ballooning budget deficit, the federal government has begun to reinvent itself by adopting more stringent fiscal policies. As a supplement to existing policies, an industry analysis will be conducted of the firms that the federal government currently has relationships with, in an effort to determine whether best business practices are being applied by those entities.

B. PURPOSE

The Defense Sector and Homeland Security Industry are currently experiencing a period of rapid consolidation. Very Large, defense focused conglomerates are being formed, increasing the bargaining position of the few firms that remain in the market. As the single customer for many products of the defense industry, DoD must have the ability to identify and address potential harmful effects of mergers and acquisitions. The purpose of this thesis is to determine whether consolidation activity within the defense sector yields positive net benefits for shareholders, and more importantly its effect on taxpayers.

This thesis researches and investigates the business case for defense sector consolidation, as it pertains to the corporations involved in consolidation activity, and the DoD, acting in its capacity as guardian of the public trust.

C. BENEFITS OF THE RESEARCH

This thesis will assess the effectiveness of merger and acquisition activity within the Defense Sector. As a result of the data and subsequent analysis contained within this report, both decision makers within the DoD and shareholders will obtain a better level of understanding with regard to the benefits and downfalls of Defense Sector consolidation.

D. RESEARCH OBJECTIVE

The primary objective of this thesis is to gain insight as to the effectiveness of defense sector consolidation, and its bearing on taxpayers and shareholders.

1. Second Order Objectives

a. Determine whether an income transfer from taxpayers to shareholders is taking place as a result of defense sector consolidation.

b. Determine whether defense sector mergers are leading to economies of scale and scope.

c. Determine whether conglomerates within the defense sector are experiencing size efficiencies.

d. Provide an answer to the following question: If synergies do not result from the mergers, are there other motivations at work?

E. SCOPE

The research centers around the financial performance and overall effectiveness of the following eight U.S. Defense firms: Lockheed Martin (LMT), Boeing Co (BA), General Dynamics (GD), Goodrich Corp (GR), Northrop Grumman (NOC), Raytheon Co (RTN), L-3 Communications Holdings (LLL), and Alliant Techsystems (ATK). Each firm’s balance sheet, income statement, and statement of cash flows will be examined, in order to gauge each corporations operating performance. A model will also be developed utilizing each firm’s monthly stock price over the past 15 years, as a means by which to ascertain the capital gains returned to shareholders over that period. An examination of various GAO reports on the cost savings to the government as a direct result of defense contractor restructuring will be conducted.

This thesis will include an outline of the guidance contained within the U.S. Department of Justice and the Federal Trade Commission’s jointly issued “1992 Horizontal Merger Guidelines”, and the “Non-Horizontal Merger Guidelines”.

F. METHODOLOGY

The information utilized in the development of this thesis was obtained through a thorough analysis of current literature and periodicals, journal articles, technical reports, organizational experiences with regard to defense contractor restructuring, as well as online financial references. This research uses the following data sources: a comprehensive review of the merger and acquisition guidance within the Department of Justice and the Federal Trade Commission, an examination of past analysis contained within GAO reports, and a review of Thomson Financial's Merger and Acquisition database

G. RESEARCH QUESTIONS

The primary research question is: Will consolidation within the defense sector improve the financial performance of defense contractors while simultaneously yielding cost savings to taxpayers? The secondary research questions are as follows:

1. Why are firms interested in mergers and acquisitions?
2. What precipitated the need for defense sector consolidation?
3. Have the firms engaged in the merger and acquisition activity increased their profitability?
4. Have capital gains improved as a result of merger and acquisition activity?
5. Have the acquiring and merged firms outperformed the Standard and Poor's 500 index?
6. Has competition suffered as a result of defense sector consolidation?
7. Has the government, and more importantly taxpayers benefited as a result of defense sector consolidation?

H. ORGANIZATION OF THE THESIS

The thesis is organized as follows:

- Chapter I. Introduction
- Chapter II. Provides a synopsis of the Cold War, specifically, the events of the world that provided the catalyst for the Cold War, the significant events of the Cold War, and the conclusion of the Cold War.
- Chapter III. The fundamental reasons for mergers and acquisitions between firms, and a look at defense sector consolidation and its effects. Stakeholder analysis of the defense industry will be conducted.
- Chapter IV. Regulations governing mergers and acquisitions: An examination of the Horizontal Merger Guidelines and the Non-Horizontal Merger Guidelines.
- Chapter V. Explains operating performance and capital gains results as a result of merger and acquisition activity. Examines the effects of defense sector consolidation on taxpayers. This chapter also provides an analysis of the financial data pertaining to each defense firm.
- Chapter VI. Draws conclusions based on the analysis and provides recommendations on methods by which defense sector consolidation can become more beneficial for each stakeholder. This chapter also presents areas for further research.

I. RESEARCH APPLICATION

The intended primary beneficiaries of this thesis are Department of Defense (DoD) acquisition community decision makers, and corporations looking to engage in defense related merger and acquisition activity. The lessons learned from this research may be incorporated into merger and acquisition feasibility studies on the part of both the DoD and private and public firms looking to engage in either mergers or acquisitions.

II. THE COLD WAR REVISITED

A. INTRODUCTION

The rash of merger and acquisition activity that has taken place within the defense sector is a by-product of the policy changes adopted after the sudden conclusion of the Cold War. The Cold War can best be described as a 42-year military campaign, pitting competing ideologies, capitalism[1] (United States) against communism[2] (Union of Soviet Socialist Republics), whereby the two world powers, and major participants, the United States (US) and the Union of Soviet Socialist Republics (USSR) looked to "spend" one another into oblivion. For firms engaged in the business of national defense, this was a glorious time, and the most profitable of years.

When the end of the Cold War necessitated that a reduction in defense spending take place, many firms within the defense industry suddenly found themselves carrying excess capacity, and operating inefficiently. A major industry-wide reorganization was needed in order to increase operational efficiencies and ultimately profits. In this case, competitiveness can only be restored through downsizing and consolidation. This chapter will detail and outline the significant events and milestones of the Cold War, and its effect on the defense industry.

B. A RACE FOR ARMS

What would come to be known as the "Cold War," actually found its beginnings in a National Security Council document known as NSC-68[3]. With the "loss" of China

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[1] An economic system in which all or most of the means of production are privately owned and operated, and the investment of capital and the production, distribution and prices of commodities (goods and services) are determined mainly in a free market, rather that by the state. (www.wikipedia.com) (08/04/05)

[2] A theoretical system of social organization and a political movement based on common ownership of the means of production. As a political movement, communism seeks to establish a classless society. (www.wikipedia.com) (08/04/05)

[3] NSC-68 was a classified report written by Paul Nitze and issued by the United States Security Council on 14 April 1950, during the presidency of Harry Truman. The report outlined the National Security Strategy of the United States for that time and provided a comprehensive analysis of the capabilities of the Soviet Union and of the United States of America from military, economic, political, and psychological. (www.wikipedia.com) (08/04/05)

coinciding with the explosion of the Soviet atom bomb[4], the U.S. was now forced to take drastic measures. At the end of January 1950, President Truman ordered the expeditious development of the hydrogen bomb. He also called for an overview of America's foreign and defense policies. The result of the review was a secret National Security Council document known as NSC-68. NSC-68 noted that the American atomic monopoly had been broken, and argued that Soviet strength would have to be met by conventional means. NSC-68 concluded by calling for a massive increase of expenditure on conventional arms, from $13 billion to $50 billion. A race for arms had begun.

Listed below in chronological order are the significant events of the Cold War, which followed NSC-68 (Adapted from "COLD WAR"):

- On 1 November 1952, the U.S. completes a successful test of the Hydrogen bomb (H-Bomb);
- Nine months later on August 12, 1953, the Soviet Union successfully tested their own version of the H-Bomb;
- In December of 1953, President Dwight D. Eisenhower proposed a speech at the United Nations, which centered on the notion that "competition be replaced with international cooperation on atomic energy." This proposal came to be known as Atoms for Peace;
- In 1955, President Eisenhower warned, "*The problem in defense spending is to figure how far you should go without destroying from within what you are trying to defend from without.*"
- On 5 October 1957, at 0128, the Soviet launched Sputnik satellite orbits the earth. The U.S. now found itself behind in the crucial race for space dominance;

The report argued that the Soviet Union had a systematic strategy aimed at the spread of Communism across the entire world, and it recommended that the U.S. government adopt a policy of containment to stop the further spread of communism. NSC-68 outlined a drastic foreign policy shift from defensive to active containment and advocated aggressive military preparedness. (www.wikipedia.com) (08/04/05)

[4] The USSR successfully tested an atomic bomb on August 29, 1949, at 0700. (COLD WAR 145)

- During 1958, the pressure on President Eisenhower forced him, against his better judgment, to increase defense spending. In a revised budget for 1959, he enlarged spending on the military to well over half the federal budget, at more than $40 billion;

- Throughout 1959, the development of the next generation of missiles, the submarine fired Polaris, the Thor, and the Minuteman, pushed defense spending even higher. President Eisenhower was furious, and expressed the need to avoid "hysteria and demagoguery," and instead "exert some reasonable control" over defense spending;

- On 12 April 1961 the Russians celebrated their finest triumph when they launched the first man into outer space. The Cold War was just sent into the heavens;

- In October 1964, China completed a successful test of an atomic bomb. The nuclear threat to the U.S. increased by 100%.
    - Less than three years later, the Chinese developed and tested a hydrogen bomb;

- President Ronald Reagan's Committee on Present Danger, which was strongly anti-communist, made a recommendation to the President to significantly increase defense expenditures upon taking office;
    - Within two weeks of taking office, President Reagan increased the defense budget by $32.6 billion.
    - Secretary of Defense Caspar Weinberger, announced that his mission was to "rearm America";
    - The Pentagon received almost everything that it requested, including the B-1 bomber, which President Jimmy Carter had scrapped, an enlarged Navy, and reinforcements of conventional weaponry;
    - Through the decade the national debt would soar from *$1 trillion to $4 trillion*;

- *President Reagan reasoned that the United States could afford the cost of a new escalation in the arms race, but the Soviets could not*.

C. THE END OF THE COLD WAR

The following bullets chronicle the events leading to the conclusion of the Cold War:

- At the end of March 1989, the Soviet Union held its first largely free elections in seventy-five years;
- On 9 November 1989, the Berlin Wall came crumbling down. This event symbolized the end of communism in Europe;
- On 2 December 1989, Mikhail Gorbachev proclaimed, "We don't consider you (U.S.) as an enemy anymore. Things have changed."
  - This was the determining sentence that ended an era.
- On 12 June 1991, Boris Yeltsin was elected to the newly created post of President of Russia.
  - Yeltsin received 57 percent of 80 million votes;
  - Yeltsin was the first democratically elected leader in Russian history.
- On 31 July, 1991, at a summit in Moscow, President George H. W. Bush and Mikhail Gorbachev signed START I[5], beginning a new sequence of strategic arms reduction agreements;
- On 20 and 21 August 1991, Estonia and Latvia declared for independence from Soviet rule, and Lithuania reaffirmed its declaration of 1990;

[5] START, officially the STrategic Arms Reduction Treaty, was a nuclear weapons limitation treaty between the United States and the Soviet Union. The treaty was initially proposed by President Ronald Reagan. It was retroactively named START I when the second START treaty, START II began to be discussed and later went into effect. It was signed on 31 July 1991, five months before the collapse of the Soviet Union. The treaty placed limits on the number of various types of vehicles and warheads that could be deployed by either side. It remains in effect, as a treaty between the US and Russia, Belarus, Kazakhstan, and Ukraine. Belarus, Kazakhstan and Ukraine have since totally disarmed their nuclear capability. (www.wikipedia.com) (08/04/05)

- o The republics of Ukraine, Belarus, Moldavia, Azerbaijan, Uzbekistan, Kirghizia, Tadzhikistan, and Armenia all followed soon after.

- ➢ On 2 September 1991, President Bush announced that the United States recognized the independence of the Baltic states;
- ➢ The Soviet State Council followed suit on 6 September 1991.
- ➢ On 25 December 1991, the Union of Soviet Socialist Republics (USSR) ceased to exist.
- ➢ In his 1992 State of the Union address, President Bush claimed triumphantly that the United States had "won the Cold War."

D. THE COST OF THE COLD WAR

No one will ever definitively know for sure how much social good or social change could have taken place, had the world chose to make capital expenditures on items other than those pertaining to weapons of mass destruction. One estimate shows that $8 trillion ($8,000,000,000,000) was spent worldwide, on nuclear and other weapons between 1945 and 1996. (COLD WAR, 418) Please review Table 1 for a breakdown of what $8 trillion dollars translates into for the common person.

- ➢ In the United States, according to government figures, expenditures on National Defense, which peaked as a proportion of gross domestic product (GDP) during the Second World War at nearly 40 percent, ran at over 10 percent in the 1950's, 9 percent in the 1960's, and declined to around 5 percent in the 1970's, the years of détente[6].
  - o Spending rose steeply again, however, in the 1980's to over 6 percent of GDP; (Review Figure 1 for defense spending trends from 1980 thru 2004.)

[6] Détente is French for relaxation. It was also the general reduction in the tension between the Soviet Union and the United States and a weakening of the Cold War, occurring from the late 1960's until the start of the 1980's. More generally, it may be applied to any international situation where previously hostile nations not involved in an open war "warm up" to each other and threats de-escalate. (www.wikipedia.com) (08/04/05)

- In real terms, spending ran at $400 billion annually, in 1996 dollars, during Korea, Vietnam, and the second half of the 1980's.

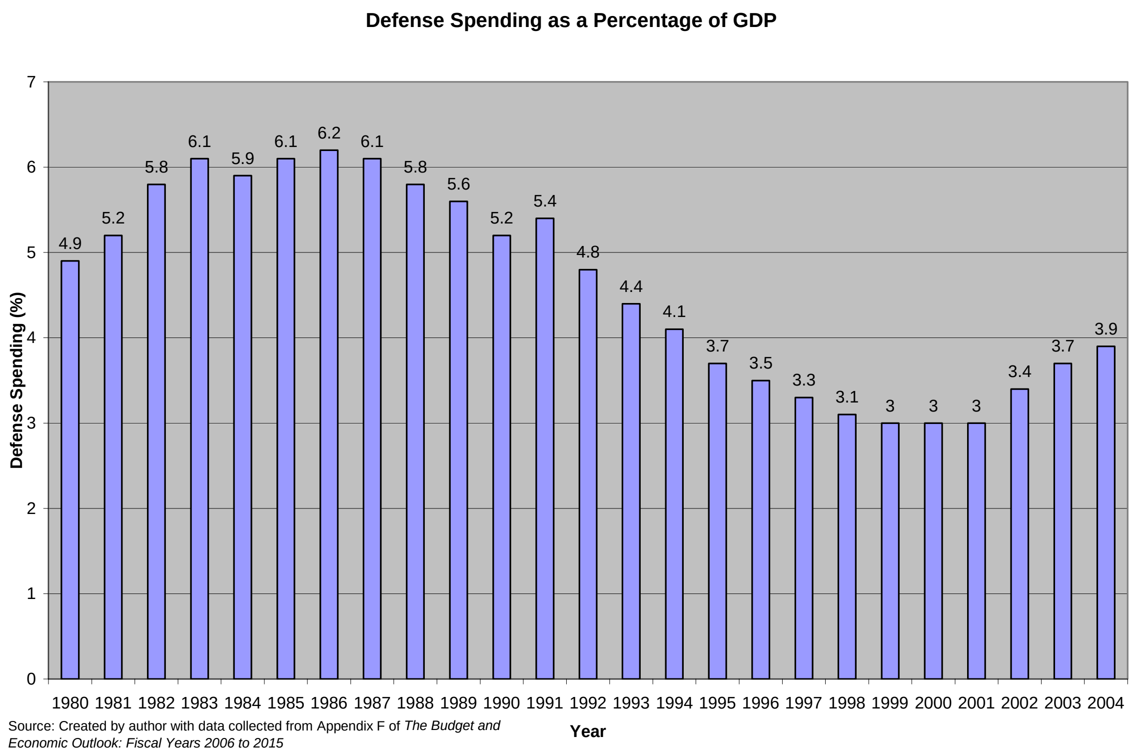

Figure 1. Defense Spending Trend 1980 – 2004

Table 1. What $8 trillion can Buy

Item	Cost	Number Purchased for $8 trillion
Average U.S. Home[7]	$ 212,000	37,735,849
2005 Honda Civic 4-door sedan	$ 19,760	404,858,300
Food needed to feed a family of four[8]	$ 6,283	1,273,277,097

[7] Median price valid for September 2005, according to the National Association of Realtors.

[8] In 1963-1964, Molly Orshansky of the Social Security Administration developed poverty thresholds. Orshansky based her poverty thresholds on the "thrifty food plan," which was the cheapest of four food plans developed by the Department of Agriculture. Orshansky surmised that families of three or more persons spent about one third of their after-tax income on food. She then multiplied the cost of the USDA economy food plan by three to arrive at the minimal yearly income a family would need. Using 1963 as a base year, she calculated that a family of four, two adults and two children would spend $1,033 for food per year. Using her formula based on the 1955 survey, she arrived at $3,100 a year ($1,033 X 3) as a poverty threshold for a family of four. (http://www.ocpp.org/poverty/how.htm) (11/20/05)

According to the 2004 Health and Human Services (HHS) Guidelines, the poverty threshold for a family of four is $18,850 (48 Contiguous States and D.C.). Taking the $18,850 poverty threshold, and dividing it by 3, you arrive at a yearly food threshold of $6,283. (http://aspe.hhs.gov/poverty/04poverty.shtml) (11/20/05)

III. FUNDAMENTAL REASONS BEHIND MERGER AND ACQUISITION ACTIVITY

A. WHY DO FIRMS ENGAGE IN MERGER AND ACQUISITION ACTIVITY?

The key principle behind mergers[9] and acquisitions[10] (M&A) is quite basic in that companies that engage in M&A do so in an effort to create shareholder value over and above that of the sum of the two companies. The two combined companies are expected to carry more value than two separate companies. Mergers and acquisitions seek to obtain synergistic effects. The following information pertaining to the intricacies of mergers and acquisitions has been taken from a tutorial provided by www.investopedia.com.

The likelihood that either a merger or acquisition will take place increases significantly when times are tough. Strong companies will look to buy other companies to create a more competitive, cost-efficient firm. The companies will come together hoping to gain a greater market share or maximize efficiency. Because of these potential benefits, target companies will often agree to be purchased when they know they cannot survive alone. In the defense industry, the DoD has encouraged the defense industry to consolidate facilities and eliminate excess capacity to remain competitive and financially viable. The expectation from the DoD is that cost savings will result from the consolidation activity.

1. Synergy

Synergy is the magic force that allows for enhanced cost efficiencies of the new business. Synergy takes the form of revenue enhancement and cost savings. By merging, the companies hope to benefit from the following:

---

[9] The combining of two or more companies, generally by offering the stockholders of one company securities in the acquiring company in exchange for the surrender of their stock. Basically, when two companies become one. This decision is usually mutual between both firms. (http://www.investopedia.com) (08/04/05)

[10] When one company purchases a majority interest in the acquired. Acquisitions can either be friendly or unfriendly. Friendly acquisitions occur when the target firm agrees to be acquired, unfriendly acquisitions don’t have the same from the target firm. (http://www.investopedia.com) (08/04/05)

- Staff reductions – Money is saved when staffs and workforces are reduced.

- Economies of scale – One large firm placing orders reduces its transactions costs relative to small firms. Larger firms also enjoy greater purchasing power—when placing larger orders, companies have a greater ability to negotiate price with their suppliers.

- Acquiring new technology – To stay competitive, companies need to stay on top of technological developments and their business applications. By buying a smaller company with unique technologies, a large company can keep or develop a competitive edge.

- Improved market reach and industry visibility – Companies buy companies to reach new markets and grow revenues and earnings. A merger may expand the combined companies' marketing and distribution, giving them new sales opportunities. A merger can also improve a company's standing in the investment community: bigger firms often have an easier time raising capital than smaller ones.

As this thesis points out later on, achieving synergy is easier said than done—it is not realized once two firms merge. In many instances, one and one add up to equal less than two. There are times whereby synergistic opportunities may exist only in the minds of the corporate leaders and dealmakers. Where there is no value to be created, the CEO and investment bankers—who have much to gain from a successful M&A deal—will try to build up the image of enhanced value. The market, however, eventually sees through this and penalizes the company by assigning it a discounted share price.

2. Varieties of Mergers

There are no one size fit all merger deals or definitions. Mergers take on many different forms and structures. Listed below are a few of the various types, distinguished by the relationship between the two merging firms:

- **Horizontal merger**: Two companies that are in direct competition in the same product lines and markets (i.e. Lockheed Corp. and Martin Marietta)

- **<u>Vertical merger</u>**: A customer and company or a supplier and company. Think of a diamond supplier to a manufacturer of rings.

- **Market-extension merger**: To companies that sell the same products in different markets. Consider Bayliner and Northrop Grumman

- **Product-extension merger**: Two companies selling different but related products in the same markets. Think of Ferrari purchasing Land Rover as an introduction into the sport utility vehicle (SUV) market.

- **Conglomeration**: Two companies that have no common business areas. Think of a bank purchasing a grocery chain.

From the perspective of how the merger is financed, there are two types of mergers: purchase mergers and consolidation mergers. Each has certain implications for the companies involved, and for investors:

- ***Purchase Mergers*** – This type of merger occurs when one company purchase another one. The purchase is made by cash or through the issue of some kind of debt instrument, and the sale is taxable.[11]

- ***Consolidation Mergers*** **–** With this merger, a brand new company is formed and both companies are bought and combined under the new entity. The tax terms are the same as those of a purchase merger.

3. Acquisitions

Like mergers, acquisitions are actions through which companies seek to obtain economies of scale, efficiencies, and enhanced market visibility. Unlike all mergers, all acquisitions involve one firm purchasing another—there is no exchanging of stock or consolidating as a new company. Acquisitions are often congenial, with all parties feeling satisfied with the deal. On the other hand, acquisitions can often times be more hostile.

[11] Acquiring companies often prefer this type of merger because it can provide them with a tax benefit. Acquired assets can be "written-up" to the actual purchase price, and the difference between book value and purchase price of the assets can depreciate annually, reducing taxes payable by the acquiring company.

In an acquisition, a company can buy another company, with cash, with stock (as outright compensation, not as an exchange), or a combination of the two. Another possibility which is common in smaller deals, is for one company to acquire all the assets of another company, which means that the acquired firm will have only cash (and debt, if they had debt before).

Regardless of their category or structure, all mergers and acquisitions have one common goal: they are all meant to create synergy that makes value of the combined companies greater than the sum of the two parts. The success of a merger or acquisition depends on how well this synergy is achieved.

B. HOW DO YOU VALUE AN ACQUISITION CANDIDATE?

Investors in a company that is aiming to take over another one must determine whether the purchase will benefit them. In order to do so, they must ask themselves how much the company being acquired is actually worth. The most common means by which to value a company is to look at comparable companies within a given industry, but dealmakers employ a variety of methods and tools when assessing a target company. A few examples are listed below:

1. Comparative Ratios: The following are two examples of the many comparative metrics by which acquirers may base their offers:

- *P/E (price-to-earnings) ratio* – With the use of this ratio, an acquirer makes an offer as a multiple of the earnings the target company is producing. Looking at the P/E for all the stocks within the same industry group will give the acquirer good guidance for what the target's P/E multiple should be.

- *EV/Sales (price-to-sales) ratio* – With this ratio, the acquiring company makes an offer as a multiple of revenues, again, while being aware of the P/S ratio of other companies in the industry.

2. Replacement Cost: In a few cases, acquisitions are based on the cost of replacing the target company. Suppose the value of a company is simply the sum of all its equipment and staffing costs. The acquiring company can

literally order the target to sell at that price, or it will create a competitor. Naturally, it takes a long time to assemble good management, acquire property, and get the right equipment. Creating a method of establishing a price certainly wouldn't make much sense in a service industry where the key assets are people and ideas.

3. ***Discounted Cash Flow (DCF)*****:** A key valuation tool in M&A, discounted cash flow analysis determines a company's current value according to its estimated future cash flows. Forecasted free cash flows (operating income + depreciation + amortization of goodwill – capital expenditures – cash taxes – change in working capital), discounted to a present value using the company's weighted average cost of capital (WACC).

Synergy: The Premium for Potential Success

For the most part, acquirers nearly always pay a substantial premium on the stock market value of the company they acquire. The justification for doing so nearly always boils down to the notion of synergy: a merger benefits shareholders when a company's post-merger share price increases by the value of potential synergy. It stands to reason that it would be highly unlikely for rational owners to sell if they would benefit more by not selling. For sellers, that premium represents their company's future prospects. For buyers, the premium represents the post-merger synergy they expect can be achieved. The following equation solves for the minimum required synergy:

$$\frac{\textbf{Pre-Merger Value of Both Firms + Synergy}}{\textbf{Post-Merger Number of Shares}} = \textbf{Pre-Merger Stock Price}$$

The success of a merger is measured by whether the value of the buyer is enhanced by the action. However, the practical constraints of a merger often prevent the expected benefit from being fully achieved.

What to Look For

To find merger that have a chance of success, investors should start by look for the following criteria:

- A reasonable purchase price – A premium of 10% can be considered reasonable, whereas a premium of 50% requires synergy of stellar proportions for the deal to make sense.

- Cash transactions – Companies that pay in cash tend to be more careful when calculating bids, and valuations come closer to target. When stock is used as the currency for acquisition, discipline can go by the wayside.

- Sensible appetite – An acquirer should target a company that is smaller and in businesses that the acquirer knows intimately. Synergy is hard to create from companies in disparate business areas.

C. DOING THE DEAL

1. The Acquirer's Offer

When a CEO and top managers of a company decided they want to execute a merger or acquisition, they start with a tender offer[12]. The process begins with the acquiring company carefully and discreetly buying shares in the target company, and building a position. Once the acquiring company starts to purchase shares in the open market, it is restricted to buying 5% of the total outstanding shares before it must file with the SEC. In filing, the company must formally declare how many shares it owns and whether it intends to buy the company or keep the shares purely as an investment.

2. The Target's Response

Once the tender offer has been made, the target company can do one of several things:

- *Accept the terms of the offer* – If the target firm's top managers and shareholders are happy with the terms of the transaction, they will go ahead with the deal.

[12] An offer to purchase some or all of shareholders' shares in a corporation. The price offered is usually at a premium to the market price. Tender offers may be friendly or unfriendly or unfriendly. SEC laws require any corporation or individual acquiring 5% of a company to disclose information to the SEC, the target company, and the exchange.

- *Attempt to negotiate* – The tender offer price may not be high enough for the target company's shareholders to accept, or the specific terms of the deal may not be attractive. In a merger, there may be much at stake for the management of the of the target—their jobs in particular. If management is not satisfied with the terms as presented in the tender offer, the target's management may try to work out more agreeable terms that let them keep their jobs, or perhaps even better, the ability to exist justly compensated.

- *Execute a poison pill[13] or some other hostile takeover[14] defense* – A poison pill defense can be triggered by a target company when a hostile suitor acquires a predetermined percentage of company stock. To execute its defense, the target company grants all shareholders—except the acquirer—options to buy additional stock at a dramatic discount. This dilutes the acquirer's share and intercepts its control of the company.

- *Find a white knight* – As an alternative, the target company's management may seek out a friendlier potential acquirer, or white knight. If a white knight is found, it will offer an equal or higher price for the shares than the hostile bidder.

3. Closing the Deal

Once the target company agrees to the tender offer, and regulatory requirements are met, the merger deal will be executed by means of some transaction. In a merger in which one company buys another, the acquirer will pay for the target company's shares with cash, stock, or both.

- A cash for stock transaction is fairly straightforward: target-company shareholders receive a cash payment for each share purchased. This transaction is treated as a taxable sale of the shares of the target company.

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13 A strategy used by a corporation to discourage a hostile takeover. The target company attempts to make its stock less attractive to the to the acquirer. There are two types of poison pills:

1. A "flip-in" allows existing shareholders (except the acquirer) to buy more shares at a discount.
2. The "flip-over" allows shareholders to buy the acquirers shares at a discounted price after the merger. (www.investopedia.com) (11/20/05)

14 A takeover attempt that is strongly resisted by the target firm. (www.investopedia.com) (11/20/05)

- If the transaction is made with stock instead of cash, then it is not taxable. There is simply an exchange of share certificates. The desire to steer clear of the IRS is why so many merger an acquisition deals are carried out as cash for stock transactions.

When a company is purchased with stock, new shares from the acquirer's stock are issued directly to the target company's shareholders, or the new shares are sent to a broker who manages them for target-company shareholders. Only when the shareholder of the target company sell their new shares are they taxed.

When the deal is closed, investors usually receive a new stock in their portfolio—the acquiring company's expanded stock. Sometimes investors will get new stock identifying a new corporate entity that is created by the M&A deal.

D. THE NEED FOR STAKEHOLDER ANALYSIS

The novelty of mergers or acquisitions conducted within the defense sector is that 1). For most products and services, there is only one end user; and 2). The DoD has the power to block mergers that it deems to not be in the best interest of national defense, or that it determines will harm the taxpayer in any way. In order for firms within the defense industry to avoid consolidation setbacks, stakeholder analysis must be conducted, making sure to assign the proper weighting to each stakeholder.

1. What is Stakeholder Analysis?

Stakeholder analysis is a process of systematically gathering and analyzing qualitative information, to determine whose interests should be taken into account when developing and/or implementing a program or plan. It provides a visual means of identifying stakeholder support.

Utilizing the influence-interest matrix will allow you to develop clusters of stakeholders that may exhibit different levels of interest, capacities, and relevance for the issue.

Table 2. Influence-Interest Matrix

	Low Influence	High Influence
Low Stake	least Priority Stakeholder Group	useful for decision and opinion formulation, brokering
High Stake	important stakeholder group perhaps in need of empowerment	most critical stakeholder group

Source: http://hq.unhabitat.org/cdrom/governance/html/st.htm (11/21/2005)

2. Who is a Stakeholder?

Stakeholders in a process are actors (persons or organizations) with a vested interest in the policy being promoted. The first step in stakeholder identification is to establish the stakeholder group. There are five major stakeholder groups:

Shareholders (traditional, institutional, socially responsible)

Workplace (executives, employees, contractors, workers in supply chain)

Community (where you source, operate, and sell)

Marketplace (suppliers, customers, consumers)

Environment (natural resources and systems)

Next, these stakeholders or "interested parties," can usually be grouped into the following categories: international/donors, national political (legislators/governors), public (Social Security Administration, Department of Veterans), labor (unions, medical associations), commercial/private for-profit, nonprofit (nongovernmental organization [NGO], foundations), civil society, and users/consumers.

3. Which Stakeholder Characteristics are Analyzed?

The analysis includes such stakeholder characteristics as knowledge of the policy, interests related, to the policy, position for or against the policy, potential alliances with other stakeholders, and ability to affect the policy process (through power and or leadership).

4. Major Steps in Stakeholder Analysis

I. Planning the Process

II. Selecting and Defining a Policy

III. Identifying Key Stakeholders

IV. Adapting the Tools

V. Collecting and Recording the Information

VI. Filling in the Stakeholder Table (Refer to Table 3)

VII. Analyzing the Stakeholder Table

VIII. Using the Information

Table 3. Stakeholder Table

Stakeholder	Importance	Relative influence	Risks/assumptions	Action

Source: http://www.hull.ac.uk/php/cesagh/documents/StakeholderAnalysis.rtf (11/22/2005)

Plan strategies for approaching and involving each person or group. How to do this will usually depend on the results of the previous analysis. How involved each stakeholder is will depend on the appropriate type and level of participation. There is no need to involve reluctant stakeholders, and stakeholders may change their level of involvement as the process continues. Thus, partnerships should be flexible and designed to grow.

5. Stakeholder Analysis Applied to the DoD

The below table reflects the preparation of a stakeholder table by a generic defense contracting firm.

Table 4. Defense Sector Stakeholder Table

Stakeholder	Importance	Relative Influence	Risks/Assumptions	Action
Management	High	High	If the terms of the acquisition are not agreeable with management's strategic objectives, they may seek to block the merger/acquisition by seeking out a "White Knight", or by offering a "Poison Pill".	Management must deem the merger/acquisition to be not only in the best interest of shareholders, but also consistent with the goals and desire of the Board and Senior management.
Shareholders	High	High	Shareholders seek the greatest return on equity.	The net benefits of the proposed deal must be made aware to shareholders.
DoD	High	High	Any acquisition needs to demonstrate increased value, and must not adversely effect competition.	Defense firms must make aware to the DoD, the overwhelming net benefits of the proposed deal.
Congress	High	High	Congress does not want to see small or disadvantaged businesses negatively impacted as a result of the merger/acquisition. Congress would also like to see a reduction in taxpayer expenses as a result of the transaction. Congress would like to stem the erosion of the defense industrial base.	Congress must ensure that anti-competitive practices are not taking place.
Taxpayers	High	Moderate	Taxpayers would like to see their tax dollars utilized in the most efficient manner practicable. An overall reduction in tax burden is also desired by taxpayers.	The net benefits of the proposed deal must be made aware to taxpayers.

Foreign Defense Firms	Low	Low	Foreign defense contractors are actively attempting to enter the U.S. defense market. They are increasingly seeking to establish joint partnerships with U.S. defense contractors.	Foreign defense firms must demonstrate that by allowing them to enter the U.S. defense industry, 1).Competition will increase, 2). Prices for products and services will decrease, 3). Innovation and quality will improve, 4). National security will not be compromised.
Foreign Governments	Low	Low	Any practices deemed to be anti-competitive will be disputed by foreign nations. Retaliation in the form of increased tariffs will be considered by the governments of foreign nations.	Allied nations should jointly work together to open each country's defense industry to foreign competition.

Source: Thesis Author

E. WHY MERGERS AND ACQUISITIONS FAIL

Those who advocate mergers will argue that the merger will cut costs or boost revenues by more than enough to justify the price premium. The argument often appears to be oh so simple: just combine computer systems, merge a few departments, use sheer size to force down the price of supplies, and the merged giant should be more profitable than its parts. The argument sounds appealing, but in practice, the song often carries a markedly different tune.

Historical trends show that roughly two thirds of big mergers will disappoint on their own terms, which means they will lose value on the stock market. Motivations behind mergers can be flawed and efficiencies from economies of scale may prove elusive.

1. Flawed Intentions

During times of over exuberance in the stock market, M&A activity increases. Deals done with highly rated stock as currency are easy and cheap, but the strategic thinking behind them may also prove easy and cheap. On many occasions, mergers are attempts to imitate: a competitor has carried out a big merger, which prompts top executives to follow suit.

Mergers often have more to do with glory-seeking than business strategy. The executive ego, which is boosted by buying the competition, is a major force in mergers and acquisitions, especially when combined with the influences from the bankers, lawyers, and other assorted advisors who can earn big commissions from clients engaged in mergers. Most CEO reach the top through their will to succeed, and many top executives get a big bonus for merger deals, no matter what happens to the share price later.

On the other side, mergers can be driven by generalized fear. Globalization, Department of Defense expenditure cuts, the arrival of new technological developments, or a fast-changing economic landscape that makes the outlook uncertain are all factors that can create a strong incentive for defensive mergers. Sometimes the management team feels they have no choice and must acquire a rival before being acquired. The idea is that only big players will survive a more competitive world.

2. The Obstacles to Making the Deal Work

Coping with a merger can make top managers spread their time too thinly, at the expense of their core business. Too often, potential difficulties seem trivial to managers caught up in the thrill of the big deal.

The chances for success are further hampered if the corporate cultures of the companies are very different. A study conducted in 2000 by McKinsey & Co. found that a company's highest return ratio is the "return on talent," the company must ensure that it maintains the most desirable personnel when the smoke clears. When a company is acquired, the decision is typically based on product or market synergies, but cultural differences are often ignored. It is a mistake to assume that personnel issues are easily overcome. For example, employees at a target company might be accustomed to easy access to top management, flexible work schedules, or even a relaxed dress code. These aspects of a working environment may not seem significant, but if new management removes them, the result can be resentment and shrinking productivity.

A 2001 McKinsey & Co. study titled "Why mergers fail," concluded that companies often fail to focus on revenue growth, with the expectation that revenues will just continue to roll in. The study goes on to mention that most companies lose their

revenue momentum while concentrating on cost synergies or failing to focus systematically on post-merger growth.

IV. REGULATIONS GOVERNING MERGERS AND ACQUISITIONS

A. 1992 HORIZONTAL MERGER GUIDELINES[15]

Corporations involved in merger and acquisition activity must not only comply with the rules and regulations as set forth by the Security and Exchange Commission's (SEC) Division of Corporation Finance[16], but they also must adhere to the principles and guidelines as promulgated by the U.S. Department of Justice (DoJ) and the Federal Trade Commission (FTC). Responsibility for conducting antitrust reviews and approving mergers and acquisitions lies with the Department of Justice and the Federal Trade Commission. In 1992, the DoJ and the FTC jointly issued Horizontal Merger Guidelines revising the DoJ's 1984 Merger Guidelines and the FTC's 1982 Statement Concerning Horizontal Merger Guidelines. According to the 1992 Horizontal Merger Guidelines, the Guideline's tenet is as follows:

> Central to the 1992 Department of Justice and Federal Trade Commission Horizontal Merger Guidelines is a recognition that sound merger enforcement is an essential component of our free enterprise system benefiting the competitiveness of American firms and the welfare of American consumers. Sound merger enforcement must prevent anticompetitive mergers yet avoid deterring the larger universe of pro-competitive or competitively neutral mergers. The 1992 Horizontal Merger Guidelines implement this objective by describing the analytical foundations of merger enforcement and providing guidance enabling the business community to avoid antitrust problems when planning mergers. The Department first released Merger Guidelines in 1968 in order to inform the business community of the analysis applied by the Department to mergers under the federal antitrust laws. The 1968 Merger Guidelines eventually fell into disuse, both internally and externally, as they were eclipsed by developments in legal and economic thinking about mergers. (Horizontal Merger 1)

15 With April 8, 1997, Revisions to Section 4 on efficiencies.

16 The Division of Corporation Finance oversees corporate disclosure of important information to the investing public. Corporations are required to comply with regulations pertaining to disclosure that must be made when stock is initially sold and then on a continuing and periodic basis. The Division's staff routinely reviews the disclosure documents filed by companies. The staff also provides companies with assistance interpreting the Commission's rules and recommends to the Commission new rules for adoption. (www.sec.gov/about/whatwedo.shtml) (11/03/05)

The Guidelines describe the analytical process that the Agency will employ in determining whether to challenge a horizontal merger. The Horizontal Merger Guidelines are comprised of five key sections, with subsequent subsections as listed below:

1. Market Definition, Measurement and Concentration

The Agency assesses whether the merger would significantly increase concentration and result in a concentrated market, properly defined and measured.

a. Product Market Definition

The Agency will first define the relevant product market with respect to each of the products of each of the merging firms

(i) Product Market Definition in the Presence of Price Discrimination: The analysis of product market definition to this point has assumed that price discrimination--charging different buyers different prices for the same product, for example--would not be profitable for a hypothetical monopolist. A different analysis applies where price discrimination would be profitable for a hypothetical monopolist.

(ii) Geographic Market Definition: For each product market in which both merging firms participate, the Agency will determine the geographic market or markets in which the firms produce or sell.

- *General Standards*: Absent price discrimination, the Agency will delineate the geographic market to be a region such that a hypothetical monopolist that was the only present or future producer of the relevant product at locations in that region would profitably impose at least a "small but significant and non-transitory[17]" increase in price, holding constant the terms of sale for all products produced elsewhere. That is, assuming that buyers likely would respond to a price increase on products produced within the tentatively identified region only by shifting to products produced at locations of production outside the region, what would happen?
- *Geographic Market Definition in the Presence of Price Discrimination*: The Agency will consider additional geographic markets consisting of particular

[17] Non-transitory: Anything lasting a long time.

locations of buyers for which a hypothetical monopolist would profitably and separately impose at least a "small but significant and non-transitory" increase in price.

(iii). Identification of Firms that Participate in the Relevant Market:

- *Current Producers or Sellers*: The Agency's identification of firms that participate in the relevant market begins with all firms that currently produce or sell in the relevant market.

- *Firms that Participate through Supply Response*: The Agency will identify other firms (uncommitted entrants) not currently producing or selling the relevant product in the relevant area as participating in the relevant market if their inclusion would more accurately reflect probable supply responses.

1. <u>Production Substitution and Extension-- The Switching or Extension of Existing Assets to Production or Sale in the Relevant Market</u>: Production substitution refers to the shift by a firm in the use of assets from producing and selling one product to producing and selling another. Production extension refers to the use of those assets, for example, existing brand names and reputation, both for their current production and for production of the relevant product. Depending upon the speed of that shift and the extent of sunk costs incurred in the shift or extension, the potential for production substitution or extension may necessitate treating as market participants firms that do not currently produce the relevant product.

2. <u>Obtaining New Assets for Production or Sale of the Relevant Product</u>: If new firms, or existing firms without closely related products or productive assets, likely would enter into production or sale in the relevant market within one year

without the expenditure of significant sunk costs of entry and exit, the Agency will treat those firms as market participants.

(iv). Calculating Market Shares:

- *General Approach*: The Agency normally will calculate market shares for all firms (or plants) identified as market participants in Section 1.3 based on the total sales or capacity currently devoted to the relevant market together with that which likely would be devoted to the relevant market in response to a "small but significant and non-transitory" price increase.

- *Price Discrimination*: When markets are defined on the basis of price discrimination (Sections 1.12 and 1.22), the Agency will include only sales likely to be made into, or capacity likely to be used to supply, the relevant market in response to a "small but significant and non-transitory" price increase.

- *Special Factors Affecting Foreign Firms*: Market shares will be assigned to foreign competitors in the same way in which they are assigned to domestic competitors. However, if exchange rates fluctuate significantly, so that comparable dollar calculations on an annual basis may be unrepresentative, the Agency may measure market shares over a period longer than one year.

(v). Concentration of Market Shares: Market concentration is a function of the number of firms in a market and their respective market shares. As an aid to the interpretation of market data, the Agency will use the Herfindahl-Hirschman Index[18] ("HHI") of market concentration.

- *General Standards*: In evaluating horizontal mergers, the Agency will consider both the post-merger market concentration and the increase in concentration resulting from the merger.

[18] The HHI is calculated by summing the squares of the individual market shares of all the participants. For example, a market consisting of four firms with market shares of 30 percent, 30 percent, 20 percent and 20 percent has an HHI of 2600 ($30^2 + 30^2 + 20^2 + 20^2 = 2600$). The HHI ranges from 10,000 (in the case of a pure monopoly) to a number approaching zero (in the case of an atomistic market). Although it is desirable to include all firms in the calculation, lack of information about small firms is not critical because such firms do not affect the HHI significantly. (Horizontal Merger 25)

- *Factors Affecting the Significance of Market Shares and Concentration*: In some situations, market share and market concentration data may either understate or overstate the likely future competitive significance of a firm or firms in the market or the impact of a merger.

    1. <u>Changing Market Conditions</u>: The Agency will consider reasonably predictable effects of recent or ongoing changes in market conditions in interpreting market concentration and market share data.

    2. <u>Degree of difference Between the Products and Locations in the Market and Substitutes Outside the Market</u>: All else equal, the magnitude of potential competitive harm from a merger is greater if a hypothetical monopolist would raise price within the relevant market by substantially more than a "small but significant and non-transitory" amount.

2. The Potential Adverse Competitive Effects of Mergers

The Agency assesses whether the merger, in light of market concentration and other factors that characterize the market, raises concern about potential adverse competitive effects.

a. Lessening of Competition Through Coordinated Interaction

A merger may diminish competition by enabling the firms selling in the relevant market more likely, more successfully, or more completely to engage in coordinated interaction that harms consumers. The Agency will examine the extent to which post-merger market conditions are conducive to reaching terms of coordination, detecting deviations from those terms, and punishing such deviations.

(i). <u>Lessening of Competition Through Unilateral Effects</u>**:** A merger may diminish competition even if it does not lead to increased likelihood of successful coordinated interaction, because merging firms may find it profitable to alter

their behavior unilaterally following the acquisition by elevating price and suppressing output.

- *Firms Distinguished Primarily by Differentiated Products*: In some markets the products are differentiated, so that products sold by different participants in the market are not perfect substitutes for one another. In this setting, competition may be non-uniform (i.e., localized), so that individual sellers compete more directly with those rivals selling closer substitutes.

    1. <u>Closeness of the Products of the Merging Firms</u>**:** The market concentration measures provide a measure of this effect if each product's market share is reflective of not only its relative appeal as a first choice to consumers of the merging firms' products but also its relative appeal as a second choice. If the merging firms have a combined market share of at least thirty-five percent, the Agency will presume that a significant share of sales in the market are accounted for by consumers who regard the products of the merging firms as their first and second choices.

    2. <u>Ability of Rival Sellers to Replace Lost Competition</u>: A merger is not likely to lead to unilateral elevation of prices of differentiated products if, in response to such an effect, rival sellers likely would replace any localized competition lost through the merger by repositioning their product lines.

        - ❖ <u>Firms Distinguished Primarily by Their Capacities</u>: Where products are relatively undifferentiated and capacity primarily distinguishes firms and shapes the nature of their competition, the merged firm may find it profitable unilaterally to raise price and suppress output. The merger provides the merged firm a larger base of sales on which to enjoy the resulting price rise

and also eliminates a competitor to which customers otherwise would have diverted their sales.

3. Entry Analysis

The Agency assesses whether entry would be timely, likely and sufficient either to deter or to counteract the competitive effects of concern.

a. Entry Alternatives

The Agency will examine the timeliness, likelihood, and sufficiency of the means of entry (entry alternatives) a potential entrant might practically employ, without attempting to identify who might be potential entrants.

b. Timeliness of Entry

The Agency generally will consider timely only those committed entry alternatives that can be achieved within two years from initial planning to significant market impact.

c. Likelihood of Entry

An entry alternative is likely if it would be profitable at pre-merger prices, and if such prices could be secured by the entrant.

d. Sufficiency of Entry

Where the concern is unilateral price elevation as a result of a merger between producers of differentiated products, entry, in order to be sufficient, must involve a product so close to the products of the merging firms that the merged firm will be unable to internalize enough of the sales loss due to the price rise, rendering the price increase unprofitable.

4. Efficiencies

The Agency assesses any efficiency gains that reasonably cannot be achieved by the parties through other means.

a. The Agency will consider only those efficiencies likely to be accomplished with the proposed merger and unlikely to be accomplished in the

absence of either the proposed merger or another means having comparable anticompetitive effects.

b. The Agency will not challenge a merger if cognizable[19] efficiencies are of a character and magnitude such that the merger is not likely to be anticompetitive in any relevant market.

5. Failure and Exiting Assets

The Agency assesses whether, but for the merger, either party to the transaction would be likely to fail, causing its assets to exit the market.

a. Failing Firm

A merger is not likely to create or enhance market power or facilitate its exercise if the following circumstances are met:

(i). The allegedly failing firm would be unable to meet its financial obligations in the near future;

(ii). It would not be able to reorganize successfully under Chapter 11 of the Bankruptcy Act;

(iii). It has made unsuccessful good-faith efforts to elicit reasonable alternative offers of acquisition of the assets of the failing firm that would both keep its tangible and intangible assets in the relevant market and pose a less severe danger to competition than does the proposed merger;

(iv). Absent the acquisition, the assets of the failing firm would exit the relevant market.

b. Failing Division

A division is considered to be "failing" if it meets the following criteria:

(i). Upon applying appropriate cost allocation rules, the division must have a negative cash flow on an operating basis;

[19] *Cognizable efficiencies* are merger-specific efficiencies that have been verified and do not arise from anticompetitive reductions in output or service. Cognizable efficiencies are assessed net of costs produced by the merger or incurred in achieving those efficiencies.

(ii). Absent the acquisition, it must be that the assets of the division would exit the relevant market in the near future if not sold.

B. NON-HORIZONTAL MERGER GUIDELINES

The Non-Horizontal Merger Guidelines were created to provide oversight where mergers between prime contractors and subcontractors (suppliers), also known as vertical integration, were concerned. The Defense Science Board (DSB) defines vertically integrated firms as those that either do satisfy, or are able to satisfy, some or all of the inputs for their products or services internally (from within the firm). One simple way to illustrate the concept of vertical integration is to think of any industry as consisting of vertical "tiers" of products or services. Companies in lower tiers provide components for inclusion in higher-tier firms' products.

The Department of Justice and the Federal Trade Commission are concerned that non-horizontal mergers, if left un-regulated, would create obstructions to competition in the following four ways:

a. Preferring internal over external suppliers: *Gaining new internal sources of supply may cause a parent to favor the internal source over the external suppliers, even if external suppliers are superior*.

b. Increasing barriers to market entry: *Vertically integrated firms who refuse to supply their competitors, or choose to supply them on undesirable terms, can raise barriers to the market entry of their competitors*.

c. Compromising proprietary information: *The merger or acquisition of a firm's supplier by a competitor raises concerns about inappropriate use of the firm's proprietary information by the competitor in markets where the two firms compete*.

d. Refusing to use suppliers owned by competitors: *After a merger or acquisition that restructures the vertical relationship between firms, competitors may be reluctant to enter into supply or teaming*

arrangements with the consolidated firm for fear that the firm could act to disadvantage its competitors.

All mergers involving the vertical integration of suppliers are reviewed to ensure that anti-competitive practices do not occur. The principal theories under which the Department of Justice is likely to challenge non-horizontal mergers will be outlined below.

1. Elimination of Specific Potential Entrants

a. Theory

(i). Harm to "Perceived Potential Competition": By eliminating a significant present competitive threat that constrains the behavior of the firms already in the market, the merger could result in an immediate deterioration in market performance.

(ii). Harm to "Actual Potential Competition": By eliminating the possibility of entry by the acquiring firm in a more pro-competitive manner, the merger could result in a lost opportunity for improvement in market performance resulting from the addition of a significant competitor.

- *Relation Between Perceived and Actual Potential Competition*: Actual potential competition has independent importance. Firms already in the market may not find it optimal to set price low enough to deter all entry; moreover, those firms may misjudge the entry advantages of a particular firm and, therefore, the price necessary to deter its entry.

- *Enforcement Standards*: The Department of Justice will consider any specific evidence presented by the merging parties to show that the inferences of competitive harm drawn from the objective factors are unreliable. The factors that the Department will consider are as follows:

    1. Market Concentration: Barriers to entry are unlikely to affect market performance if the structure of the market is otherwise not conducive to monopolization or collusion.

2. <u>Conditions of Entry Generally</u>: If entry to the market is generally easy, the fact that entry is marginally easier for one or more firms is unlikely to affect the behavior of the firms in the market.

3. <u>The Acquiring Firms Entry Advantage</u>: If more than a few firms have the same or a comparable advantage in entering the acquired firm's market, the elimination of one firm is unlikely to have any adverse competitive effect.

4. <u>The Market Share of the Acquired Firm</u>: Entry through the acquisition of a relatively small firm in the market may have a competitive effect comparable to new entry. Small firms frequently play peripheral roles in collusive interactions, and the particular advantages of the acquiring firm may convert a fringe firm into a significant factor in the market.

5. <u>Efficiencies</u>: The Department of Justice will consider expected efficiencies in determining whether to challenge a potential competition merger.

2. Competitive Problems from Vertical Mergers

a. Barriers to Entry from Vertical Merger

The vertical integration resulting from vertical mergers could create competitively objectionable barriers to entry.

(i). <u>Need for Two-Level Entry</u>: The Department is unlikely to challenge a merger on this ground where post-merger sales (or purchases) by unintegrated firms in the secondary market would be sufficient to service two minimum-efficient-scale plants in the primary market.

(ii). <u>Increased Difficulty of Simultaneous Entry of Both Markets</u>: If entry at the secondary level is easy in absolute terms, the requirement of simultaneous entry to that market is unlikely adversely to affect entry to the primary market.

(iii). Structure and Performance of the Primary Market**:** Barriers to entry are unlikely to affect performance if the structure of the primary market is otherwise not conducive to monopolization or collusion.

b. Facilitating Collusion through Vertical Mergers

(i). Vertical Integration to the Retail Level: A high level of vertical integration by upstream firms into the associated retail market may facilitate collusion in the upstream market by making it easier to monitor price.[20]

(ii). Elimination of a Disruptive Buyer: The elimination by vertical merger of a particularly disruptive buyer in a downstream market may facilitate collusion in the upstream market.

c. Evasion of Rate Regulation

Non-horizontal mergers may be used by monopoly public utilities subject to rate regulation as a tool for circumventing that regulation.[21]

d. Efficiencies

An extensive pattern of vertical integration may constitute evidence that substantial economies are afforded by vertical integration. Therefore, the Department will give relatively more weight to expected efficiencies in determining whether to challenge a vertical merger than in determining whether to challenge a horizontal merger.

[20] Retail prices are generally more visible than prices in upstream markets, and vertical mergers may increase the level of vertical integration to the point at which the monitoring effect becomes significant. (Non-Horizontal 6)

[21] The clearest example is the acquisition by a regulated utility of a supplier of its fixed or variable inputs. After the merger, the utility would be selling to itself and might be able, arbitrarily, to inflate the prices of internal transactions.

V. OPERATING PERFORMANCE OF DEFENSE FIRMS ENGAGED IN MERGER AND ACQUISITION ACTIVITY

A. INTRODUCTION

The previous chapters addressed the history of the defense industry in relation to the Cold War, the fundamental reasons behind mergers and acquisitions, and the regulations governing merger and acquisition activity. There are many firms within the defense industry, so it was necessary to pare the group down to a manageable size. First, the Defense News' Top 100[22] was reviewed to gain insight as to the largest and most relevant participants in the defense industry. Next, Thomson Financial's Merger & Acquisition database was analyzed in detail, for data on acquisition activity within the defense industry. Once the data was reviewed, and the sample group was established, a method on analysis needed to be developed.

Two of the principle objectives of this thesis were to 1). Compute the capital gains performance of each defense firm, and the performance of the group as a whole, and 2). Determine the operating performance of each defense firm as a result of M&A activity, through an analysis of the Income Statement, the Balance Sheet, and the Statement of Cash Flows. This chapter presents the quantitative results of defense sector consolidation on a company-by-company basis.

B. METHODS OF COMPUTATION

The first step necessary when attempting to quantify data is to gather accurate figures and information. Once the information and data has been gathered, a method of analysis must be developed. Listed below are the steps that were taken to yield the results covered in the next section:

1. Monthly closing stock price figures were gathered from Microsoft Money Central[23].

[22] (http://www.defensenews.com/content/features/2005chart1.html) (05/25/05)

[23] (http://c05.moneycentral.msn.com/investor/charts/chartdl.asp) (05/25/05)

   a. Data covers a 15 year period (September 1990 thru September 2005)

   b. Monthly closing stock price figures for Lockheed Martin (LMT), Boeing Co (BA), General Dynamics (GD), Goodrich Corp (GR), Northrop Grumman (NOC), Raytheon Co (RTN), L-3 Communications Holdings (LLL), Alliant Techsystems (ATK), and the Standard & Poors 500 Index ($INX) were utilized.

2. Relative price trend charts were developed for each firm to illustrate the firms' capital gain performance relative to the S&P 500.

3. A returns weighed portfolio index was created, measuring the relative performance of the portfolio, on a monthly-adjusted basis.[24]

4. The monthly and quarterly return for each firm was calculated.[25]

   a. A "sample" average quarterly return was calculated by averaging the quarterly returns for the defense firms, for each quarter.

   b. A "sample" yearly return was calculated by summing the average quarterly returns for the defense firms, for each year.

5. An annual return for each firm was calculated.

6. A capital gains model was developed, which measured each firms risk profile relative to the market, over the 15-year period.[26]

   a. The average annual return for each firm was computed;

   b. Each firm's standard deviation was computed;[27]

   c. Each firm's beta was computed.[28]

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[24] (Monthly Return for each firm * Relative Monthly Closing Market Capitalization of each firm) / Sum of the Market Capitalizations of the group.

[25] (Current Month – Previous Month) / Previous Month.

[26] The data available for L-3 Communications (LLL) covered seven years.

[27] Standard deviation is a statistical measure of the degree to which a given return will fall within a range of returns based on the historical experience of a fund. It is used to assess the level of volatility or risk associated with a given return. The lower the standard deviation, the lower the volatility or risk. (www.abriafunds.com/education_glossary_of_terms.html) (11/03/05)

7. Each firm's Balance Sheet, Income Statement, and Statement of Cash Flows was analyzed, in order to gauge each firms operating performance as a result of their merger and acquisition activity. The growth rate was computed for the year of the merger/acquisition, and the two years following the merger/acquisition. The relevant data from each statement is listed below:
    a. Statement of Cash Flows
        i. Net Earnings
        ii. Net Cash Flows from Operating Activities
    b. Income Statement
        i. Net Sales
        ii. Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA)
    c. Balance Sheet
        i. Total Shareholders Equity
8. Sample group average growth rates were calculated, in order to gauge each firm's performance relative to the other firms in the sample group.

C. RESULTS OF ANALYSIS: WHAT THE DATA TELLS US

Firms engaged in merger and acquisition activity do so for the underlying reason that the transactions are expected to improve the long-term prospects of the firms engaged in the merger/acquisition. Two areas whereby improvement should take place would be:

[28] Beta is the measure of a fund's volatility relative to the market. (Almost all fund managers correlate themselves to the S&P 500). A beta of greater than 1.0 indicates that the fund is more volatile than the market, and less than 1.0 is less volatile than the market. For example, if the market rises 1% and a fund has a beta greater than 2.5, the fund will rise, on average, 2.5%. For a fund with a beta of 0.4, if the market rises 1%, the fund will rise on average, 0.4%. (www.hedgefund.net/glossary.php3) (11/03/05)

1. Operating performance: As displayed in the Balance Sheet, Income Statement, and Statement of Cash Flows. Over time, positive increases in operating performance will be reflected as a higher stock price, thereby netting increases in capital gains.

2. Stock price appreciation (capital gains).

The Thomson Financial Merger and Acquisition database provides historical information on M&A activity within various industries and sectors of the market. For the purpose of this thesis, the database has been filtered to list only those mergers/acquisitions that have taken place within the U.S., since 1990, and were conducted by firms involved in the manufacture of aircrafts and tanks.[29] Review Table 5 for the results of the search.

Table 5. Merger & Acquisition Database

Lockheed Martin (LMT)

Date	Acquired Firm	Transaction Value ($'s in Millions)	
3/30/1995	Merger between Lockheed Corp. and Martin Marietta	N/A	
1993	GE Aerospace	$	883
1996	Loral Corp	$	7,344
11/3/1997	14.9% stake in Northrop Grumman	$	2,757
1999	49% stake in COMSAT	$	1,203
2003	Affiliated Computer Services	$	585

Boeing Co (BA)

Date	Acquired Firm	Transaction Value ($'s in Millions)	
7/11/1996	2.3% stake in LTV Aerospace & Defense Co	$	703.95
8/1/1996	Rockwell Intl Corp-Aerospace	$	3,085.70
12/17/1996	McDonnell Douglas Corp	$	13,359
5/4/2004	Fairchild Dornier Corp	N/A	

General Dynamics (GD)

Date	Acquired Firm	Transaction Value ($'s in Millions)	
7/30/1999	3.5% buyback of Gulfstream Aerospace Corp	$	114
6/30/2000	4.8% buyback of Saco Defense Corp	$	137
1/26/2001	Primex Technologies Inc	$	5,419.72
6/5/2001	4.9% buyback of Galaxy Aerospace Corp	$	378.125
6/14/2002	Advanced Technical Products	N/A	
7/9/2004	Spectrum Astro Inc	$	516.588

[29] The Standard & Poor's NetAdvantage was also utilized during this research effort to gather information on M&A activity. (www.netadvantage.standardandpoors.com) (05/04/05)

Goodrich Corp (GR)

Date	Transaction	Transaction Value ($'s in Millions)
5/31/2002	Spin-off of Coodrich Corp-Engineered land to shareholders	N/A
3/31/2002	Sale of Avionics Systems to L-3 Communications	N/A

Northrop Grumman (NOC)

Date	Acquired Firm	Transaction Value ($'s in Millions)	
3/10/1994	General Dynamics' - Ft. Worth Division	$	2,104
5/18/1994	Grumman Corp	$	1,842
8/31/1994	Vought Aircraft Co	$	142
6/2/1999	Ryan Aeronautical	$	140
5/30/2001	Litton Industries Inc	$	5,158
10/22/2001	Aero Jet - Gen. Corp	$	315
12/11/2002	TRW Inc	$	6,677

Raytheon Co (RTN)

Date	Acquired Firm	Transaction Value ($'s in Millions)	
11/23/1992	7.42% buyback of Cessna Aircraft	$	450
2/24/1994	8.9% buyback of General Dynamics' Missle Business	$	736.5
1/16/1997	McDonnell Douglas Corp	$	9,500
12/18/1997	Hughes Aircraft	N/A	
6/13/2003	65% stake in Flight Options LLC	N/A	

L-3 Communications Holdings (LLL)

Date	Acquired Firm	Transaction Value ($'s in Millions)	
3/11/2002	Raytheon Co - Aircraft Integration	$	115
3/31/2003	Goodrich Avionics Systems	$	1,130
6/12/2003	AeroMet Inc	$	188
12/21/2004	EER Systems Corp	N/A	
1/5/2005	BAI Aerosystems Inc	$	20
2/25/2005	General Dynamics Corp - Propulsion	N/A	
3/1/2005	Boeing Electron Dynamic	$	185

Alliant Techsystems (ATK)

Date	Acquired Firm	Transaction Value ($'s in Millions)	
5/31/2002	Boeing Co - Ordinance Business	$	15.4
10/28/2002	Science & Applied Technology	$	129.153
11/21/2003	Allied Aerospace - Hypersonic	$	60.688
3/15/2004	Mission Research Corp	$	685

Source: Information compiled by author from Standard & Poor's NetAdvantage and Thomson Financials M&A database.

1. Operating Performance

As mentioned earlier in the chapter titled "Why Do Firms Engage in Merger and Acquisition Activity?", mergers/acquisitions are entered into as a means by which to

create shareholder value over and above that of the sum of the two companies involved in the transaction. The two combined companies are expected to carry more value than two separate companies. The vehicle through which this is achieved is called synergy. For more information on how firms achieve synergy, please review Chapter III.

a. Defense Sector Operating Performance [Refer to Table 12 & Table 13 titled "DEFENSE INDUSTRY FINANCIAL PERFORMANCE"]

In terms of operating performance, the results of the defense sector mergers/acquisitions are mixed. Using the year prior to the acquisition as a base, an acceleration in growth rate was only achieved in the Earnings Before Interest, Taxes, Depreciation, and Amortization. Though the growth rate for each of the five measured categories remained positive when comparing the acquisition year to the second year after the transaction, two out of five categories (Income Growth (-22.80%) and Cash Flow Growth (-2.40%)) actually experienced negative growth between the first and second years after the transaction. Granted, firms performed to varying degrees in each of the five measured categories, but as a whole, the financial results of the M&A activity were mild.

On the surface, marked improvements to profitability do not appear to have materialized as a result of the merger/acquisition activity. The main reason for the transactions may have more to do with survival in a dwindling industry, and maintaining a competitive edge, and less to do with the attainment of synergies, and subsequent improvements in financial performance.

2. Capital Gains Performance [Refer to Table 6 & Table 11 in the Appendix]

The previous section on Operating Performance displayed that the benefits of mergers/acquisitions are not necessarily synergistic in effect, but instead can come to fruition through improvements in the competitive position of a firm, or can assist a firm in surviving in a shrinking industry. This section will detail the stock price appreciation that has materialized because of the defense sector industry consolidation.

During the period covering September 1990 thru September 2005, each of the sampled defense firms outperformed the S&P 500 Index (9.77%), on an annualized basis,

with the exception of Raytheon (9.77%), which had an identical return [See Table 6]. Had you invested in a portfolio containing the eight defense firms listed below, you would have received an annual return of 15.49%. The portfolio's standard deviation of 17.03% was only 2.78% higher than the markets, yet the return exceeded the markets by 58.55%. This is a tradeoff that most investors would be willing to accept.

The ability of the defense firms to outperform the market over the past 15 years, leads one to conclude that the market placed a high value on the consolidation of the defense sector. As sensible consolidation within the defense industry continues, the certainty and stability of the survival of those firms that remain, increases. It is no secret that the market values certainty and stability.

Table 6. Average Annual Capital Gains from September 1990 – September 2005

Capital Gains										
	LMT	**BA**	**GD**	**GR**	**NOC**	**RTN**	**LLL (7yrs)**	**ATK**	**$INX**	**Portfolio**
Return	15.62%	11.19%	23.04%	11.34%	17.00%	9.77%	13.88%	24.14%	9.77%	15.49%
StdDev	26.48%	28.19%	27.21%	24.70%	26.16%	21.06%	22.51%	24.18%	16.57%	17.03%
Beta	-0.44	0.40	0.44	0.61	0.01	-0.01	-0.25	-0.48	1.00	0.04

Source: Thesis Author

D. EFFECTS OF DEFENSE SECTOR CONSOLIDATION ON TAXPAYERS

As the sole customer for most of the defense related products manufactured and sold in the United States, the Department of Defense has approval authority over defense related mergers and acquisitions. The DoD's primary concerns with regard to defense sector consolidation revolve around three key principles.

1. How will the merger/acquisition affect national security?
2. Will the defense industrial base be negatively affected as a result of the merger/acquisition?
3. Will the taxpayer benefit from the merger/acquisition?

The Defense Contract Management Agency (DCMA) has lead responsibility for implementing the DoD's restructuring regulations and for monitoring defense contractor

business combinations. For the purposes of this thesis, we will assume that there are no conflicts with items one or two above.

Government Accountability Office (GAO) Studies on Defense Restructuring Costs

In two separate GAO reports conducted in 1996, it was determined that cost-savings are realized as a result of defense sector restructuring.

GAO performed the April 1996 study[30] to ensure that the requirements as stated in Section 818 of the National Defense Authorization Act for Fiscal Year 1995 were strictly adhered to. The GAO "…sought to determine whether the certification process was carried out in accordance with the interim regulations and whether restructuring had resulted in lower DoD contract prices." (Defense Contractor 1) The focus of the study was United Defense's, Limited Partnership business combination between FMC Corporation's Defense Systems Group and Harsco Corporation's BMY-Combat Systems Division. As a result of the consolidation, United Defense was able to move the final assembly and test of most product lines from California to Pennsylvania. DoD received confirmation from the U.S. Army Tank-Automotive and Armaments Command (TACOM), that United Defense's restructuring efforts netted a savings to the DoD of $2.49 for every dollar in restructuring costs. These savings were realized during a follow-on contract, when the new contract came in 11 percent lower than a previous contract for the same equipment.

In September of 1996, GAO commissioned a study[31] researching the realized savings from Martin-Marietta Corporation's acquisition of GE Aerospace. The report cited that "Although certified savings are less than initially estimated, the contractor's overhead costs are lower as a result of savings from these projects." (Defense Restructuring 2) The DoD projected that Martin-Marietta would reduce DoD's share of overhead costs by $2.01 for every dollar in restructuring costs. DoD concluded:

> …The reduction in projected overhead costs is reflected in lower overhead rates for these business segments, and the lower overhead rates have been

30 Defense Contractor Restructuring: First Application of Cost and Savings Regulations. (07/11/05)

31 Defense Restructuring Costs: Projected and Actual Savings From Martin-Marietta Acquisition of GE Aerospace. (07/11/05)

> provided to procuring activities for use in pricing DoD contracts. When procuring activities use the lower rates, DoD's contract price will be lower than they would have been had it not been for the restructuring under these five projects. (Defense Restructuring 6)

The GAO reports illustrate that defense sector consolidation can have a positive impact on taxpayers in the form of lower contract prices., which equates to reduced government expenditures, and ultimately lower taxes.

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VI. CONCLUSIONS AND RECOMMENDATIONS

A. INTRODUCTION

This chapter summarizes the research presented in this thesis by reviewing the primary and secondary research questions and stating the conclusions that result from analysis of the compiled data. This chapter concludes with the researcher's recommended areas for further study and analysis.

In order to fully grasp the answers provided by this thesis, and the analysis of the raw data, one must possess a basic understanding of the premise of this thesis (*Will consolidation within the defense sector improve the financial performance of defense contractors, while simultaneously yielding cost savings to taxpayers?*).

The reader was first introduced to the events surrounding the Cold War. An appreciation of the Cold War was an essential component of this thesis since the events surrounding the Cold War shaped the defense industry, and precipitated the need for today's defense sector restructuring. The reader was next educated on the fundamental reasons for mergers and acquisitions between firms. An examination of the business case for M&As was conducted. Stakeholder analysis was performed on the defense industry to gain a generic impression of the dynamic environment within the defense sector. In Chapter IV, an outline of the Horizontal and Non-Horizontal Merger Guidelines, governing merger and acquisition activity within the U.S., was provided. Chapter V provided the results of the analysis of the raw data. The raw data was collected from various sources, and analyzed to gain concrete answers to the research questions. GAO reports pertaining to the projected cost-benefits of past defense sector restructuring efforts were consulted.

B. CONCLUSIONS AND SUMMARY

The expectation coming into this thesis was that the consolidation activity within the defense sector was primarily taking place in an effort to:

1. Create a monopoly position for the firms involved; and

2. Make the shareholders wealthy at the expense of the taxpayers.

It was also my belief that the acquisitions were taking place with very little meaningful oversight from the Department of Defense.

Upon further review…

At the conclusion of the research, my impressions of mergers and acquisitions took a 180 degree change in directions. The research allowed for the positive and seemingly conclusive resolution of the following research questions:

1. *Why are firms interested in mergers and acquisitions?*

   ANSWER: Firms engaged in mergers and acquisitions do so for a variety of reasons. There is not one definitive "Right" answer. Firms engage in M&As in order to obtain synergies, improve their competitive position, survive, etc… Ultimately, placing the firms in a position to allow for management to uphold their fiduciary responsibility to shareholders is the overriding factor.

2. *Have the firms engaged in merger and acquisition activity increased their profitability?*

   ANSWER: Some firms have achieved higher profitability in the wake of M&As, whereas other firms have fared less well. As a whole, the mergers examined in this study did not appear to significantly improve profitability, nor did the mergers/acquisitions significantly harm profitability. If there is not a improvement to profitability, why enter into M&As? The answer may concern maintaining or achieving a superior competitive position in a declining industry.

3. *Have capital gains improved as a result of merger and acquisition activity?*

   ANSWER: The data does not provide a definitive answer. In terms of capital appreciation, the firms do not appear to fare better than prior to M&A transactions. Over time, the capital gains appreciation for the eight firms

examined in this thesis are positive. How much better or worse off the firms would have been had the transactions not taken place is difficult to surmise.

4. *Have the acquiring and merged firms outperformed the Standard and Poor's 500 index?*

ANSWER: With the exception of Raytheon, each firm significantly outperformed the Standard & Poor's 500 Index over the 15 year period evaluated. Sustained performance of this magnitude makes it difficult to dispute the M&As executed by the eight defense firms. The mergers must have been deemed to play a necessary part in the long-term success of the organizations involved.

5. *Has competition suffered as a result of defense sector consolidation?*

ANSWER: Competition does not appear to have been a casualty of defense sector consolidation. In fact, the build-up during the Cold War era created an over supply of defense contractors. A market correction is currently underway, which will bring the number of defense contractors more inline with the demand side of the equation.

6. *Has the government, and more importantly taxpayers benefited as a result of defense sector consolidation?*

ANSWER: Consolidation within the defense industry has yielded significant cost savings to taxpayers. GAO has conducted studies which demonstrate this fact. Over time, the tax savings will either make their way back to taxpayers in the form of lower tax rates, or the savings may be utilized by the DoD in recapitalization efforts.

C. RECOMMENDATION

In an effort to mitigate the effects, on the defense industrial base, of defense sector consolidation and reductions in U.S. defense spending, the Federal Government may want to consider increasing the scope of the Foreign Military Sales (FMS) program.

Foreign military sales allows for U.S. defense firms to sell stripped down versions of their products to foreign militaries.

By increasing their sales to foreign militaries, defense firms would be able to put idle capacity to use, thereby strengthening and stabilizing their organizations. Another benefit of foreign military sales pertains to overhead rates. With higher productions rates, U.S. defense firms would be able to spread their overhead costs over a greater number of products, thereby decreasing the cost of each finished product. The increases in production runs resulting from FMS will also allow for the defense firms to move further down the learning curve. The move down the learning curve will reduce the cost of production over time.

The benefits resultant from learning curve efficiencies, and the spreading of overhead over a larger number of units, will net cost savings to the DoD, which will ultimately benefit taxpayers.

D. AREAS OF FURTHER RESEARCH

Several areas would benefit from further research into defense related mergers and acquisitions.

Studies should be conducted in the following areas:

- An analysis of the benefits and costs of cross border defense partnerships;
- At what point will defense sector consolidation no longer be beneficial to taxpayers and the DoD;
- How can the merger and acquisitions process be improved, to maximize the pool of available benefits to the DoD, taxpayers, and to shareholders;
- What is the monopoly threshold of the defense industry?

APPENDIX

Table 7. Discretionary Outlays

Discretionary Outlays ($'s in Billions)

	Defense	International	Domestic	Total
1979	116.8	9.1	114.1	240.0
1980	134.6	12.8	128.9	276.3
1981	158.0	13.6	136.3	307.9
1982	185.9	12.9	127.1	326.0
1983	209.9	13.6	129.8	353.3
1984	228.0	16.3	135.1	379.4
1985	253.1	17.4	145.3	415.8
1986	273.8	17.7	147	438.5
1987	282.5	15.2	146.5	444.2
1988	290.9	15.7	157.8	464.4
1989	304.0	16.6	168.2	488.8
1990	300.1	19.1	181.4	500.6
1991	319.7	19.7	193.9	533.3
1992	302.6	19.2	212.1	533.8
1993	292.4	21.6	225.4	539.4
1994	282.3	20.8	238.3	541.4
1995	273.6	20.1	251.2	544.9
1996	266.0	18.3	248.4	532.7
1997	271.7	19	256.6	547.2
1998	270.2	18.1	263.8	552.1
1999	275.5	19.5	277	572.0
2000	295.0	21.3	298.6	614.8
2001	306.1	22.5	320.8	649.3
2002	348.9	26.2	359.2	734.3
2003	404.9	27.9	392.6	825.4
2004	454.1	33.8	407.1	895.0

Discretionary Outlays as a Percentage of GDP

	Defense	International	Domestic	Total	Defense Spending Growth Rate Compared to the Previous Fiscal Year	Average Yearly Growth Rate in Defense Spending
1979	4.7	0.4	4.6	9.6		
1980	4.9	0.5	4.7	10.1	4.26%	-0.53%
1981	5.2	0.4	4.5	10.1	6.12%	
1982	5.8	0.4	3.9	10.1	11.54%	
1983	6.1	0.4	3.8	10.3	5.17%	
1984	5.9	0.4	3.5	9.9	-3.28%	
1985	6.1	0.4	3.5	10	3.39%	

1986	6.2	0.4	3.3	10	1.64%
1987	6.1	0.3	3.1	9.5	-1.61%
1988	5.8	0.3	3.1	9.3	-4.92%
1989	5.6	0.3	3.1	9.1	-3.45%
1990	5.2	0.3	3.2	8.7	-7.14%
1991	5.4	0.3	3.3	9	3.85%
1992	4.8	0.3	3.4	8.6	-11.11%
1993	4.4	0.3	3.4	8.2	-8.33%
1994	4.1	0.3	3.4	7.8	-6.82%
1995	3.7	0.3	3.4	7.4	-9.76%
1996	3.5	0.2	3.2	6.9	-5.41%
1997	3.3	0.2	3.1	6.7	-5.71%
1998	3.1	0.2	3.1	6.4	-6.06%
1999	3	0.2	3	6.3	-3.23%
2000	3	0.2	3.1	6.3	0.00%
2001	3	0.2	3.2	6.5	0.00%
2002	3.4	0.3	3.5	7.1	13.33%
2003	3.7	0.3	3.6	7.6	8.82%
2004	3.9	0.3	3.5	7.7	5.41%

Source: Appendix F of the CBO publication *The Budget and Economic Outlook: Fiscal Years 2006 to 2015*

Table 8. Monthly Stock Market Return

Monthly Return

DATE	LMT	BA	GD	GR	NOC	RTN	LLL	ATK	$INX	Portfolio
Sep-05	-1.93%	1.39%	4.33%	-3.23%	-3.10%	-3.06%	-2.82%	-2.96%	0.69%	-0.22%
Aug-05	-0.26%	1.53%	-0.52%	3.57%	1.15%	-0.28%	4.67%	5.38%	-1.12%	1.02%
Jul-05	-3.81%	0.02%	5.16%	8.01%	0.36%	0.54%	2.15%	3.40%	3.60%	0.65%
Jun-05	-0.03%	3.29%	1.44%	-2.15%	-0.84%	-0.10%	8.19%	-1.53%	-0.01%	1.58%
May-05	6.46%	7.36%	2.79%	3.87%	1.60%	4.12%	-0.27%	3.64%	3.00%	4.88%
Apr-05	-0.18%	1.81%	-1.87%	5.25%	1.59%	-2.82%	-0.07%	-3.18%	-2.01%	0.30%
Mar-05	3.11%	6.35%	1.61%	3.40%	2.04%	1.20%	-1.50%	3.21%	-1.91%	3.32%
Feb-05	2.44%	8.64%	2.03%	7.96%	1.97%	2.25%	0.97%	3.98%	1.89%	4.34%
Jan-05	4.07%	-2.26%	-1.29%	5.09%	-4.56%	-3.68%	-2.50%	1.84%	-2.53%	-1.14%
Dec-04	-8.69%	-3.36%	-3.47%	2.80%	-3.50%	-3.74%	-1.59%	-0.74%	3.25%	-4.05%
Nov-04	10.44%	7.35%	6.11%	2.98%	8.85%	10.58%	12.88%	14.58%	3.86%	8.69%
Oct-04	-1.24%	-3.33%	0.02%	-1.69%	-2.96%	-3.95%	-1.60%	-4.98%	1.40%	-2.34%
Sep-04	3.72%	-1.15%	4.57%	-1.26%	3.25%	9.36%	6.96%	4.42%	0.94%	3.05%
Aug-04	1.49%	2.90%	-1.19%	-1.76%	-1.81%	3.52%	2.44%	-7.97%	0.23%	1.14%
Jul-04	1.75%	-0.67%	-0.48%	0.00%	-2.05%	-6.21%	-8.46%	-0.60%	-3.43%	-1.45%
Jun-04	5.13%	11.55%	3.84%	15.34%	4.14%	7.58%	4.80%	3.41%	1.80%	7.34%
May-04	3.86%	7.29%	2.15%	-2.64%	3.91%	3.07%	3.24%	3.31%	1.21%	4.31%

Apr-04	4.51%	3.94%	4.80%	2.57%	0.84%	2.94%	3.80%	8.99%	-1.68%	3.64%
Mar-04	-1.38%	-5.30%	-3.03%	-4.82%	-2.66%	3.09%	11.14%	-4.73%	-1.64%	-1.82%
Feb-04	-4.81%	3.88%	0.75%	-4.41%	4.55%	-0.36%	0.11%	1.96%	1.22%	1.01%
Jan-04	-5.41%	-0.93%	1.15%	3.91%	1.16%	1.56%	4.09%	-3.05%	1.73%	-0.44%
Dec-03	11.89%	9.77%	11.77%	7.92%	3.21%	8.41%	9.16%	13.19%	5.08%	9.36%
Nov-03	-0.91%	-0.26%	-3.38%	-0.40%	3.61%	4.65%	0.66%	-1.41%	0.71%	0.33%
Oct-03	0.46%	12.12%	7.23%	13.94%	3.69%	-5.43%	8.07%	7.72%	5.50%	5.70%
Sep-03	-9.92%	-8.18%	-9.35%	-6.88%	-9.70%	-12.66%	-15.35%	-5.67%	-1.19%	-9.77%
Aug-03	-2.12%	12.89%	8.53%	13.17%	3.51%	4.43%	4.10%	-7.21%	1.79%	5.93%
Jul-03	10.03%	-3.50%	9.43%	9.52%	6.90%	-6.52%	12.85%	5.76%	1.62%	3.96%
Jun-03	2.48%	11.90%	8.50%	14.94%	-1.61%	2.50%	0.32%	2.85%	1.13%	5.48%
May-03	-7.25%	12.43%	7.65%	29.85%	-0.28%	7.05%	-2.36%	-6.05%	5.09%	4.12%
Apr-03	5.26%	8.86%	12.71%	0.07%	2.51%	5.50%	10.53%	-0.54%	8.10%	6.74%
Mar-03	4.00%	-9.07%	-7.07%	-8.52%	-1.04%	4.76%	11.21%	11.82%	0.84%	-0.81%
Feb-03	-10.44%	-12.76%	-10.40%	-10.64%	-5.15%	-10.00%	-19.32%	-11.15%	-1.70%	-10.49%
Jan-03	-11.60%	-4.24%	-16.67%	-6.11%	-5.76%	-2.15%	-0.31%	-12.81%	-2.74%	-7.49%
Dec-02	10.63%	-3.11%	-2.55%	-0.43%	0.09%	5.42%	-0.07%	5.68%	-6.03%	2.15%
Nov-02	-9.84%	14.45%	2.93%	21.85%	-6.03%	-1.12%	-4.38%	-1.91%	5.71%	1.17%
Oct-02	-10.47%	-12.83%	-2.71%	-20.11%	-16.86%	0.68%	-10.82%	-13.14%	8.64%	-9.81%
Sep-02	2.13%	-7.93%	3.42%	-9.44%	1.01%	-16.29%	3.56%	1.51%	-11.00%	-2.45%
Aug-02	-1.23%	-10.72%	-2.82%	-6.45%	10.93%	7.43%	10.10%	11.11%	0.49%	0.20%
Jul-02	-7.76%	-7.73%	-23.91%	-18.34%	-11.44%	-20.05%	-14.41%	-3.76%	-7.90%	-12.38%
Jun-02	12.01%	5.51%	5.72%	-18.23%	3.04%	-7.81%	-14.42%	-12.02%	-7.25%	3.09%
May-02	-1.35%	-4.37%	3.62%	4.67%	0.54%	4.49%	-1.24%	1.00%	-0.91%	-0.03%
Apr-02	9.24%	-7.56%	3.34%	0.88%	6.73%	3.05%	14.09%	5.60%	-6.14%	2.70%
Mar-02	2.07%	4.98%	3.38%	6.00%	5.61%	6.10%	1.96%	8.60%	3.67%	4.41%
Feb-02	6.49%	12.23%	1.47%	7.30%	-4.09%	1.10%	7.15%	5.52%	-2.08%	5.21%
Jan-02	13.50%	5.60%	12.46%	4.51%	10.71%	17.86%	13.91%	15.28%	-1.56%	11.17%
Dec-01	0.47%	10.48%	-4.22%	9.23%	7.38%	-0.92%	7.94%	-2.03%	0.76%	4.15%
Nov-01	-4.76%	7.67%	1.90%	14.15%	-6.07%	1.61%	-4.02%	-9.70%	7.52%	0.74%
Oct-01	11.47%	-2.69%	-7.61%	9.60%	-1.04%	-7.19%	-0.66%	1.94%	1.81%	-0.43%
Sep-01	9.76%	-34.57%	11.85%	-39.22%	23.17%	32.18%	30.33%	23.40%	-8.17%	4.51%
Aug-01	0.61%	-12.52%	-2.39%	-8.27%	2.21%	-8.97%	-10.05%	4.89%	-6.41%	-6.19%
Jul-01	6.94%	5.27%	3.96%	-8.00%	0.16%	8.78%	-2.23%	10.34%	-1.07%	4.43%
Jun-01	-3.24%	-11.59%	0.37%	-9.10%	-9.76%	-10.82%	-13.79%	-5.73%	-2.50%	-8.36%
May-01	8.90%	1.76%	0.57%	6.04%	-1.65%	0.81%	14.56%	1.23%	0.51%	2.76%
Apr-01	-1.37%	10.93%	22.86%	2.68%	3.74%	0.51%	-2.15%	6.38%	7.68%	7.91%
Mar-01	-4.83%	-10.43%	-7.98%	-5.12%	-7.40%	-11.53%	-3.70%	4.48%	-6.42%	-8.41%
Feb-01	8.02%	6.32%	-3.94%	12.33%	8.39%	-5.63%	2.21%	22.29%	-9.23%	4.51%
Jan-01	2.15%	-11.36%	-9.00%	-1.03%	4.43%	13.29%	4.17%	3.82%	3.46%	-2.86%
Dec-00	-0.44%	-4.43%	2.30%	-3.96%	-1.56%	-11.41%	19.15%	8.54%	0.41%	-2.53%
Nov-00	-4.88%	1.84%	6.55%	-7.48%	0.37%	2.56%	-1.99%	2.57%	-8.01%	1.08%
Oct-00	8.87%	5.14%	13.93%	4.47%	-7.57%	20.22%	16.70%	9.51%	-0.49%	7.31%

Sep-00	16.05%	20.24%	-0.20%	-4.02%	16.76%	2.65%	-4.44%	6.57%	-5.35%	13.37%
Aug-00	0.89%	9.89%	11.52%	14.40%	9.52%	13.95%	0.42%	8.92%	6.07%	9.33%
Jul-00	13.35%	16.74%	8.01%	4.77%	7.26%	26.30%	3.09%	4.94%	-1.63%	13.98%
Jun-00	0.51%	7.04%	-11.53%	-4.05%	-13.54%	-17.87%	1.98%	-2.29%	2.39%	-2.38%
May-00	-0.75%	-1.57%	0.96%	12.25%	8.11%	5.63%	5.16%	-0.90%	-2.19%	2.20%
Apr-00	21.71%	4.96%	17.59%	10.24%	33.88%	25.00%	2.53%	18.26%	-3.08%	15.71%
Mar-00	17.20%	2.37%	15.03%	19.84%	16.83%	-4.05%	22.03%	8.78%	9.67%	8.69%
Feb-00	-5.74%	-16.99%	-8.22%	-4.25%	-9.83%	-18.90%	5.75%	-16.57%	-2.01%	-12.65%
Jan-00	-15.43%	7.39%	-10.66%	-9.09%	-7.05%	-14.12%	-3.30%	4.11%	-5.09%	-2.50%
Dec-99	10.06%	2.00%	2.30%	21.88%	-1.34%	-12.69%	0.91%	13.42%	5.78%	1.33%
Nov-99	-0.63%	-11.80%	-6.99%	-4.75%	-0.14%	4.01%	-2.22%	-10.67%	1.91%	-5.41%
Oct-99	-38.81%	8.06%	-11.21%	-18.32%	-13.67%	-41.06%	11.76%	-11.27%	6.25%	-10.03%
Sep-99	-11.66%	-5.93%	-0.89%	-21.49%	-12.33%	-27.16%	-4.88%	-5.05%	-2.86%	-11.99%
Aug-99	6.28%	-0.14%	-6.41%	-10.99%	0.52%	-3.11%	-7.57%	-11.72%	-0.63%	-1.26%
Jul-99	-6.54%	3.13%	-2.27%	-2.35%	8.77%	-0.27%	-11.13%	-4.41%	-3.20%	0.37%
Jun-99	-7.88%	4.61%	4.75%	4.94%	-1.85%	3.58%	-1.90%	1.76%	5.44%	1.81%
May-99	-6.10%	3.54%	-6.41%	1.89%	5.67%	-3.11%	0.90%	3.82%	-2.50%	-0.71%
Apr-99	14.07%	19.49%	9.34%	15.85%	6.79%	19.83%	5.54%	5.39%	3.79%	15.67%
Mar-99	0.17%	-4.56%	6.31%	0.55%	-3.91%	9.71%	7.87%	-1.89%	3.88%	1.90%
Feb-99	6.91%	2.70%	3.53%	0.55%	9.32%	-4.47%	6.36%	-9.76%	-3.23%	2.41%
Jan-99	-16.81%	6.32%	-1.06%	-5.40%	-22.05%	5.05%	-13.42%	6.44%	4.10%	-2.44%
Dec-98	-18.31%	-19.69%	1.29%	-5.44%	-10.00%	-3.84%	-0.13%	8.20%	5.64%	-10.68%
Nov-98	-6.85%	8.15%	-2.10%	5.38%	1.88%	-5.04%	8.43%	8.84%	5.91%	0.40%
Oct-98	10.48%	9.47%	18.41%	9.71%	9.25%	8.11%	8.35%	5.66%	8.03%	10.23%
Sep-98	15.13%	10.91%	5.65%	21.25%	15.19%	18.22%	19.81%	0.95%	6.24%	14.05%
Aug-98	-12.16%	-20.29%	0.00%	-33.28%	-21.76%	-17.51%	-4.16%	0.86%	-14.58%	-15.99%
Jul-98	-5.84%	-12.90%	2.28%	-18.26%	-21.45%	-6.45%	6.35%	2.87%	-1.16%	-9.62%
Jun-98	-5.68%	-6.68%	4.64%	-3.17%	-3.79%	8.11%	16.07%	-1.94%	3.94%	-1.43%
May-98	0.79%	-4.62%	4.10%	-4.76%	1.42%	-3.53%		0.88%	-1.88%	-1.70%
Apr-98	-1.00%	-3.96%	-1.01%	5.39%	-1.63%	-2.89%		1.89%	0.91%	-2.09%
Mar-98	-3.59%	-3.92%	-1.15%	3.03%	-22.71%	-0.74%		-0.10%	4.99%	-5.46%
Feb-98	12.13%	13.91%	0.72%	18.18%	13.35%	12.83%		5.68%	7.04%	12.57%
Jan-98	5.65%	-2.68%	-0.14%	1.21%	6.63%	3.22%		6.61%	1.02%	2.09%
Dec-97	0.90%	-7.88%	-0.29%	-6.88%	2.11%	-9.72%		-6.20%	1.57%	-4.31%
Nov-97	2.70%	10.68%	6.91%	-0.14%	3.09%	3.11%		-0.10%	4.46%	5.77%
Oct-97	-10.84%	-11.83%	-7.13%	-1.52%	-9.99%	-8.25%		-7.66%	-3.45%	-9.79%
Sep-97	2.83%	-0.11%	9.70%	7.42%	3.68%	7.50%		-0.19%	5.32%	3.55%
Aug-97	-2.53%	-7.14%	-9.75%	-6.78%	1.68%	-1.57%		23.86%	-5.75%	-3.75%
Jul-97	2.72%	10.60%	18.00%	4.33%	31.10%	9.56%		-5.23%	7.81%	12.35%
Jun-97	10.61%	0.71%	0.17%	0.73%	3.77%	6.81%		14.29%	4.35%	4.25%
May-97	4.61%	6.84%	5.09%	7.84%	1.35%	9.14%		14.93%	5.86%	6.11%
Apr-97	6.55%	0.00%	5.36%	8.87%	10.41%	-3.05%		-0.59%	5.84%	2.85%
Mar-97	-5.08%	-3.07%	0.56%	-9.85%	4.85%	-4.24%		-3.44%	-4.26%	-2.69%

Feb-97	-3.80%	-5.02%	-4.78%	-0.91%	-7.97%	2.72%	-9.82%	0.59%	-3.44%
Jan-97	0.55%	0.59%	-0.18%	1.23%	-5.29%	-4.68%	-12.05%	6.13%	-1.21%
Dec-96	0.97%	7.17%	-4.07%	-9.75%	-0.45%	-5.87%	2.56%	-2.15%	1.09%
Nov-96	1.12%	4.19%	7.47%	5.90%	2.94%	3.81%	9.72%	7.34%	3.73%
Oct-96	-0.55%	0.93%	-0.36%	-6.09%	0.62%	-11.46%	-5.78%	2.61%	-2.38%
Sep-96	7.13%	4.42%	7.41%	20.33%	11.85%	8.01%	0.48%	5.42%	7.63%
Aug-96	1.28%	2.26%	0.20%	3.45%	4.36%	6.19%	8.68%	1.88%	3.18%
Jul-96	-1.12%	1.58%	3.23%	-3.01%	0.92%	-6.05%	0.80%	-4.57%	-0.76%
Jun-96	0.15%	2.20%	0.61%	-5.68%	8.78%	-3.05%	-1.82%	0.23%	0.93%
May-96	4.03%	3.81%	-2.38%	-0.31%	1.21%	5.19%	1.86%	2.29%	3.30%
Apr-96	6.26%	-5.19%	7.91%	0.00%	-2.75%	-1.22%	-2.58%	1.34%	-0.75%
Mar-96	-0.49%	6.78%	-1.89%	4.43%	3.04%	2.24%	-3.25%	0.79%	3.34%
Feb-96	1.16%	4.68%	2.14%	3.40%	-3.52%	2.04%	0.25%	0.69%	2.22%
Jan-96	-4.59%	-1.12%	-1.27%	8.27%	0.00%	3.97%	-1.48%	3.26%	0.05%
Dec-95	7.67%	7.55%	-0.84%	-3.03%	4.07%	6.18%	-1.22%	1.74%	5.77%
Nov-95	7.90%	11.26%	7.67%	6.45%	7.42%	2.01%	10.21%	4.10%	7.57%
Oct-95	1.30%	-4.03%	0.91%	0.00%	-5.95%	2.65%	-1.06%	-0.50%	-1.13%
Sep-95	10.27%	6.64%	4.28%	10.71%	0.00%	5.10%	0.00%	4.01%	6.06%
Aug-95	-3.18%	-4.48%	7.95%	9.68%	6.80%	-2.12%	5.32%	-0.03%	-0.58%
Jul-95	-0.40%	6.99%	9.86%	1.17%	9.35%	6.44%	6.89%	3.18%	5.79%
Jun-95	6.09%	6.37%	1.43%	8.06%	-0.48%	0.16%	13.99%	2.13%	3.83%
May-95	3.03%	7.05%	-5.66%	6.43%	5.54%	6.53%	-0.68%	3.63%	5.14%
Apr-95	9.22%	2.33%	-1.33%	5.07%	1.53%	-0.17%	-3.28%	2.80%	2.75%
Mar-95	11.03%	16.53%	-0.53%	-0.56%	10.14%	3.37%	0.99%	2.73%	9.50%
Feb-95	7.81%	3.65%	9.57%	2.88%	9.91%	5.62%	4.14%	3.61%	6.12%
Jan-95	-0.86%	-5.32%	-0.86%	0.00%	-3.87%	4.50%	-10.77%	2.43%	-1.28%
Dec-94	5.64%	4.74%	8.07%	-2.53%	3.38%	1.59%	14.84%	1.23%	3.94%
Nov-94	-4.51%	2.28%	-5.01%	-0.84%	-7.41%	-1.37%	1.80%	-3.95%	-1.69%
Oct-94	3.41%	1.45%	-3.14%	6.85%	-3.04%	-0.58%	11.65%	2.08%	0.64%
Sep-94	-11.59%	-4.95%	-3.05%	-12.04%	0.56%	-5.18%	-2.35%	-2.69%	-5.48%
Aug-94	25.00%	1.96%	12.81%	4.37%	7.14%	3.05%	4.08%	3.76%	7.95%
Jul-94	-3.63%	-3.51%	-2.14%	5.17%	13.13%	1.35%	5.60%	3.15%	0.54%
Jun-94	2.35%	-0.27%	-3.54%	-5.18%	4.95%	4.02%	28.18%	-2.68%	1.57%
May-94	4.07%	3.06%	4.63%	-1.61%	-7.52%	-3.49%	0.00%	1.24%	0.22%
Apr-94	-4.47%	1.12%	-4.57%	9.71%	-4.08%	-0.19%	-5.73%	1.15%	-0.72%
Mar-94	-2.10%	-4.81%	-8.98%	3.66%	-0.93%	4.23%	-11.93%	-4.57%	-1.49%
Feb-94	1.16%	8.09%	1.22%	-1.80%	3.54%	-8.49%	-2.68%	-3.00%	1.28%
Jan-94	-4.95%	0.00%	-0.14%	3.73%	4.01%	2.65%	-5.49%	3.25%	0.57%
Dec-93	-2.67%	11.97%	2.50%	-7.74%	-1.64%	7.76%	12.32%	1.01%	5.16%
Nov-93	1.81%	3.00%	-6.01%	-1.41%	9.35%	0.62%	-9.44%	-1.29%	1.93%
Oct-93	8.46%	-2.28%	3.93%	0.57%	-1.07%	-2.01%	2.19%	1.94%	0.59%
Sep-93	0.40%	-3.15%	-2.90%	-7.37%	-5.39%	-1.00%	5.56%	-1.00%	-2.40%
Aug-93	-5.77%	0.63%	5.12%	2.15%	-7.48%	6.81%	-6.49%	3.44%	0.67%
Jul-93	1.70%	6.42%	2.12%	9.41%	-3.89%	-4.28%	16.08%	-0.53%	1.42%
Jun-93	7.98%	-6.62%	-6.23%	-6.85%	7.40%	11.85%	4.19%	0.08%	2.77%
May-93	-1.61%	4.28%	-1.18%	-2.41%	-0.32%	-5.59%	5.52%	2.27%	-0.51%
Apr-93	-2.93%	8.57%	-2.93%	-2.86%	5.76%	4.49%	-5.73%	-2.54%	3.54%

Mar-93	8.70%	1.82%	-16.56%	12.24%	9.67%	2.53%		-4.00%	1.87%	2.99%
Feb-93	5.84%	-2.48%	3.29%	-12.50%	4.26%	2.36%		-0.99%	1.05%	1.08%
Jan-93	-1.55%	-12.15%	10.01%	0.26%	-5.49%	3.41%		-11.79%	0.70%	-2.53%
Dec-92	13.28%	14.23%	6.83%	9.83%	19.21%	11.41%		18.04%	1.01%	13.04%
Nov-92	8.42%	-2.43%	-4.90%	2.89%	11.71%	6.05%		-8.49%	3.03%	2.84%
Oct-92	-3.41%	-2.04%	19.82%	2.06%	5.13%	-4.93%		0.00%	0.21%	0.71%
Sep-92	1.60%	-1.34%	11.27%	1.50%	-2.01%	2.53%		35.90%	0.91%	1.61%
Aug-92	-1.32%	-6.88%	-3.16%	-13.47%	-11.95%	-0.84%		-4.29%	-2.40%	-5.20%
Jul-92	7.65%	0.31%	10.68%	1.85%	7.62%	1.99%		-10.44%	3.94%	3.51%
Jun-92	-1.40%	-9.12%	10.44%	-13.47%	5.00%	-1.12%		-4.71%	-1.74%	-3.38%
May-92	-3.76%	-0.28%	-1.15%	-5.40%	-4.76%	-3.78%		-2.55%	0.10%	-2.41%
Apr-92	3.05%	0.28%	0.97%	16.33%	9.38%	3.50%		10.11%	2.79%	3.61%
Mar-92	2.85%	-4.62%	9.98%	10.25%	-5.88%	-0.14%		-2.73%	-2.18%	-0.65%
Feb-92	5.72%	-9.58%	1.29%	4.94%	2.00%	4.68%		-1.61%	0.96%	-1.61%
Jan-92	-7.78%	6.54%	8.14%	2.38%	-4.76%	2.86%		5.68%	-1.99%	2.81%
Dec-91	2.86%	7.91%	10.26%	13.51%	24.26%	4.89%		2.33%	11.16%	8.72%
Nov-91	-3.58%	-10.15%	-6.48%	-12.43%	-19.91%	1.28%		-5.49%	-4.39%	-7.53%
Oct-91	13.79%	-2.96%	12.40%	-7.40%	13.44%	0.80%		-9.90%	1.18%	2.36%
Sep-91	-6.73%	2.01%	9.12%	1.67%	-16.96%	-5.34%		-6.05%	-1.91%	-1.97%
Aug-91	-8.06%	7.28%	-5.56%	-0.83%	-5.88%	-3.24%		-2.72%	1.96%	0.60%
Jul-91	6.59%	1.37%	7.46%	14.56%	17.24%	5.94%		4.25%	4.49%	6.02%
Jun-91	4.18%	-6.63%	9.12%	-2.47%	3.05%	-5.60%		11.58%	-4.79%	-2.78%
May-91	-5.63%	7.10%	1.99%	10.20%	0.51%	6.94%		11.76%	3.86%	4.76%
Apr-91	5.66%	-2.66%	12.31%	-6.07%	-15.15%	-3.21%		3.66%	0.03%	-2.36%
Mar-91	5.33%	-2.59%	34.00%	-3.40%	12.14%	8.44%		24.24%	2.22%	4.02%
Feb-91	3.91%	-2.28%	-13.04%	-5.81%	20.47%	0.67%		-8.97%	6.73%	1.03%
Jan-91	14.13%	8.82%	13.86%	13.91%	23.02%	6.95%		36.79%	4.15%	11.01%
Dec-90	9.80%	2.54%	8.02%	-1.95%	2.21%	0.90%		23.26%	2.48%	3.04%
Nov-90	15.02%	-1.12%	-2.09%	14.93%	14.29%	1.46%		14.67%	5.99%	3.57%
Oct-90	1.91%	7.51%	1.06%	5.93%	-4.03%	1.11%			-0.67%	4.37%

Table 9. Quarterly Stock Market Returns

QUARTERLY RETURNS

YEAR	QUARTER	LMT	BA	GD	GR	NOC	RTN	LLL	ATK	$INX	Portfolio
1991											
	1ST	23.36%	3.95%	34.82%	4.70%	55.63%	16.06%	0.00%	52.07%	13.10%	16.07%
	2ND	4.20%	-2.19%	23.43%	1.66%	-11.60%	-1.87%	0.00%	27.00%	-0.90%	-0.38%
	3RD	-8.20%	10.65%	11.02%	15.40%	-5.61%	-2.64%	0.00%	-4.52%	4.54%	4.65%

	4TH	13.07%	-5.20%	16.18%	-6.31%	17.80%	6.97%	0.00%	-13.07%	7.95%	3.55%
1992											
	1ST	0.79%	-7.66%	19.41%	17.57%	-8.64%	7.40%	0.00%	1.34%	-3.22%	0.54%
	2ND	-2.11%	-9.12%	10.26%	-2.54%	9.61%	-1.41%	0.00%	2.85%	1.15%	-2.18%
	3RD	7.93%	-7.90%	18.79%	-10.13%	-6.34%	3.68%	0.00%	21.16%	2.45%	-0.07%
	4TH	18.30%	9.76%	21.75%	14.79%	36.05%	12.53%	0.00%	9.55%	4.25%	16.59%
1993											
	1ST	13.00%	-12.81%	-3.26%	0.00%	8.43%	8.31%	0.00%	-16.78%	3.62%	1.53%
	2ND	3.44%	6.22%	-10.34%	-12.11%	12.84%	10.75%	0.00%	3.98%	-0.19%	5.81%
	3RD	-3.67%	3.90%	4.35%	4.19%	-16.76%	1.54%	0.00%	15.14%	1.91%	-0.30%
	4TH	7.61%	12.69%	0.43%	-8.58%	6.64%	6.36%	0.00%	5.07%	1.66%	7.68%
1994											
	1ST	-5.88%	3.28%	-7.90%	5.59%	6.62%	-1.60%	0.00%	-20.09%	-4.33%	0.36%
	2ND	1.95%	3.91%	-3.48%	2.92%	-6.64%	0.33%	0.00%	22.45%	-0.29%	1.07%
	3RD	9.78%	-6.50%	7.62%	-2.50%	20.83%	-0.78%	0.00%	7.33%	4.22%	3.01%
	4TH	4.53%	8.46%	-0.08%	3.48%	-7.06%	-0.37%	0.00%	28.29%	-0.64%	2.89%
1995											
	1ST	17.98%	14.86%	8.17%	2.32%	16.18%	13.49%	0.00%	-5.64%	8.77%	14.34%
	2ND	18.34%	15.74%	-5.56%	19.57%	6.60%	6.52%	0.00%	10.04%	8.56%	11.72%
	3RD	6.69%	9.15%	22.08%	21.56%	16.15%	9.42%	0.00%	12.21%	7.16%	11.28%
	4TH	16.87%	14.78%	7.75%	3.42%	5.53%	10.83%	0.00%	7.93%	5.35%	12.21%
1996											
	1ST	-3.92%	10.34%	-1.01%	16.10%	-0.48%	8.25%	0.00%	-4.48%	4.75%	5.61%
	2ND	10.44%	0.81%	6.14%	-5.99%	7.24%	0.91%	0.00%	-2.55%	3.85%	3.48%
	3RD	7.30%	8.26%	10.83%	20.77%	17.13%	8.14%	0.00%	9.96%	2.73%	10.05%
	4TH	1.53%	12.29%	3.04%	-9.94%	3.11%	-13.52%	0.00%	6.50%	7.80%	2.44%
1997											
	1ST	-8.34%	-7.50%	-4.40%	-9.53%	-8.41%	-6.19%	0.00%	-25.30%	2.46%	-7.34%
	2ND	21.77%	7.56%	10.62%	17.44%	15.53%	12.90%	0.00%	28.62%	16.04%	13.21%
	3RD	3.02%	3.35%	17.96%	4.97%	36.47%	15.49%	0.00%	18.44%	7.38%	12.15%
	4TH	-7.25%	-9.03%	-0.51%	-8.54%	-4.79%	-14.86%	0.00%	-13.97%	2.58%	-8.33%
1998											
	1ST	14.19%	7.31%	-0.57%	22.41%	-2.72%	15.30%	0.00%	12.19%	13.05%	9.20%
	2ND	-5.89%	-15.25%	7.73%	-2.55%	-4.00%	1.70%	16.07%	0.83%	2.97%	-5.23%
	3RD	-2.88%	-22.28%	7.94%	-30.30%	-28.03%	-5.74%	22.00%	4.68%	-9.50%	-11.56%
	4TH	-14.68%	-2.07%	17.59%	9.66%	1.13%	-0.76%	16.64%	22.70%	19.58%	-0.05%
1999											
	1ST	-9.73%	4.46%	8.78%	-4.30%	-16.64%	10.29%	0.81%	-5.21%	4.75%	1.87%
	2ND	0.09%	27.63%	7.69%	22.67%	10.60%	20.30%	4.53%	10.97%	6.74%	16.76%
	3RD	-11.92%	-2.94%	-9.57%	-34.84%	-3.04%	-30.53%	-23.58%	-21.17%	-6.69%	-12.88%
	4TH	-29.38%	-1.74%	-15.90%	-1.18%	-15.15%	-49.74%	10.44%	-8.52%	13.94%	-14.11%
2000											
	1ST	-3.97%	-7.23%	-3.86%	6.50%	-0.05%	-	24.47%	-3.68%	2.57%	-6.47%

							37.08%				
	2ND	21.47%	10.42%	7.02%	18.44%	28.46%	12.77%	9.67%	15.07%	-2.88%	15.54%
	3RD	30.29%	46.88%	19.33%	15.16%	33.55%	42.90%	-0.92%	20.43%	-0.91%	36.68%
	4TH	3.55%	2.54%	22.78%	-6.98%	-8.75%	11.37%	33.86%	20.62%	-8.10%	5.86%
2001											
	1ST	5.33%	-15.47%	-20.92%	6.18%	5.42%	-3.87%	2.68%	30.60%	-12.19%	-6.76%
	2ND	4.29%	1.10%	23.80%	-0.37%	-7.67%	-9.49%	-1.38%	1.89%	5.69%	2.31%
	3RD	17.30%	-41.82%	13.43%	-55.50%	25.54%	31.99%	18.05%	38.64%	-15.66%	2.74%
	4TH	7.19%	15.47%	-9.93%	32.98%	0.27%	-6.50%	3.26%	-9.79%	10.08%	4.46%
2002											
	1ST	22.07%	22.81%	17.31%	17.80%	12.23%	25.06%	23.02%	29.41%	0.04%	20.79%
	2ND	19.89%	-6.43%	12.67%	-12.68%	10.31%	-0.27%	-1.57%	-5.42%	-14.30%	5.76%
	3RD	-6.86%	-26.38%	-23.31%	-34.23%	0.50%	-28.91%	-0.75%	8.86%	-18.41%	-14.63%
	4TH	-9.68%	-1.49%	-2.33%	1.31%	-22.80%	4.98%	-15.27%	-9.37%	8.32%	-6.49%
2003											
	1ST	-18.04%	-26.07%	-34.14%	-25.28%	-11.95%	-7.39%	-8.42%	-12.14%	-3.61%	-18.79%
	2ND	0.48%	33.19%	28.86%	44.86%	0.61%	15.05%	8.49%	-3.73%	14.33%	16.34%
	3RD	-2.01%	1.21%	8.62%	15.82%	0.71%	-14.75%	1.60%	-7.13%	2.22%	0.12%
	4TH	11.43%	21.63%	15.62%	21.47%	10.51%	7.62%	17.89%	19.50%	11.29%	15.39%
2004											
	1ST	-11.60%	-2.35%	-1.12%	-5.32%	3.05%	4.30%	15.34%	-5.81%	1.31%	-1.24%
	2ND	13.50%	22.78%	10.79%	15.27%	8.89%	13.58%	11.84%	15.71%	1.33%	15.29%
	3RD	6.96%	1.08%	2.89%	-3.02%	-0.60%	6.67%	0.94%	-4.15%	-2.26%	2.74%
	4TH	0.51%	0.66%	2.66%	4.10%	2.39%	2.89%	9.69%	8.86%	8.51%	2.29%
2005											
	1ST	9.61%	12.73%	2.36%	16.45%	-0.55%	-0.23%	-3.03%	9.02%	-2.55%	6.52%
	2ND	6.25%	12.46%	2.37%	6.97%	2.35%	1.20%	7.86%	-1.07%	0.97%	6.75%

Source: Thesis Author

Table 10. Sample Group Average Quarterly Stock Market Return

SAMPLE GROUP AVERAGE QUARTERLY AND YEARLY RETURN

YEAR	**QUARTER**		**ANNUAL RETURN**
1991			34.60%
	1ST	23.82%	
	2ND	5.08%	
	3RD	2.01%	
	4TH	3.68%	
1992			23.46%
	1ST	3.78%	
	2ND	0.94%	

	3RD	3.40%	
	4TH	15.34%	
1993			6.32%
	1ST	-0.39%	
	2ND	1.85%	
	3RD	1.09%	
	4TH	3.78%	
1994			9.31%
	1ST	-2.50%	
	2ND	2.68%	
	3RD	4.47%	
	4TH	4.66%	
1995			37.87%
	1ST	8.42%	
	2ND	8.91%	
	3RD	12.16%	
	4TH	8.39%	
1996			15.90%
	1ST	3.10%	
	2ND	2.13%	
	3RD	10.30%	
	4TH	0.38%	
1997			10.69%
	1ST	-8.71%	
	2ND	14.30%	
	3RD	12.46%	
	4TH	-7.37%	
1998			7.80%
	1ST	8.52%	
	2ND	-0.17%	
	3RD	-6.83%	
	4TH	6.28%	
1999			-19.48%
	1ST	-1.44%	
	2ND	13.06%	
	3RD	-17.20%	
	4TH	-13.90%	
2000			48.13%
	1ST	-3.11%	
	2ND	15.41%	
	3RD	25.95%	
	4TH	9.87%	
2001			12.84%
	1ST	1.24%	
	2ND	1.52%	
	3RD	5.95%	
	4TH	4.12%	
2002			2.56%
	1ST	21.21%	

	2ND	2.06%	
	3RD	-13.88%	
	4TH	-6.83%	
2003			14.27%
	1ST	-17.93%	
	2ND	15.98%	
	3RD	0.51%	
	4TH	15.71%	
2004			18.92%
	1ST	-0.44%	
	2ND	14.04%	
	3RD	1.34%	
	4TH	3.97%	
2005			10.59%
	1ST	5.79%	
	2ND	4.80%	
	3RD		
	4TH		

Table 11. Annual Stock Market Returns from 1990 – 2005

ANNUAL RETURNS

YEAR	LMT	BA	GD	GR	NOC	RTN	LLL	ATK	$INX	Portfolio
2005	9.88%	28.12%	13.69%	31.77%	0.21%	-1.83%	8.83%	13.77%	1.59%	14.71%
2004	9.36%	22.18%	15.21%	11.02%	13.73%	27.44%	37.81%	14.60%	8.88%	19.08%
2003	-8.13%	29.95%	18.96%	56.88%	-0.12%	0.53%	19.56%	-3.50%	24.22%	13.06%
2002	25.43%	-11.49%	4.35%	-27.79%	0.25%	0.86%	5.44%	23.46%	-24.35%	5.44%
2001	34.12%	-40.73%	6.37%	-16.70%	23.56%	12.13%	22.61%	61.33%	-12.07%	2.76%
2000	51.34%	52.61%	45.27%	33.13%	53.21%	29.96%	67.08%	52.44%	-9.32%	51.60%
1999	-50.93%	27.41%	-9.00%	-17.65%	-24.23%	-49.69%	-7.80%	-23.93%	18.75%	-8.35%
1998	-9.26%	-32.29%	32.69%	-0.77%	-33.62%	10.49%	54.71%	40.41%	26.10%	-7.63%
1997	9.20%	-5.63%	23.67%	4.34%	38.80%	7.35%	0.00%	7.78%	28.47%	9.69%
1996	15.34%	31.70%	18.99%	20.94%	27.01%	3.78%	0.00%	9.43%	19.13%	21.58%
1995	59.89%	54.53%	32.44%	46.87%	44.46%	40.26%	0.00%	24.54%	29.83%	49.54%
1994	10.38%	9.15%	-3.83%	9.49%	13.74%	-2.41%	0.00%	37.98%	-1.03%	7.33%
1993	20.37%	10.00%	-8.82%	-16.50%	11.16%	26.95%	0.00%	7.42%	7.00%	14.72%
1992	24.91%	-14.91%	70.22%	19.69%	30.68%	22.20%	0.00%	34.90%	4.63%	14.87%
1991	32.43%	7.21%	85.45%	15.45%	56.22%	18.52%	0.00%	61.49%	24.69%	23.89%
AVG	15.62%	11.19%	23.04%	11.34%	17.00%	9.77%	13.88%	24.14%	9.77%	15.49%

Table 12. Sample Group Growth in Operations as a Result of M & A Activity

INCOME GROWTH	
AVERAGE NET INCOME GROWTH 1- YEAR PRIOR TO TRANSACTION	30.33%
AVERAGE NET INCOME GROWTH 1-YEAR AFTER TRANSACTION	17.40%
AVERAGE NET INCOME GROWTH IN THE SECOND YEAR AFTER TRANSACTION	-22.80%
AVERAGE TOTAL NET INCOME GROWTH COMPARING THE TRANSACTION YEAR TO THE SECOND YEAR AFTER THE TRANSACTION	19.74%

CASH FLOW GROWTH	
AVERAGE NET CASH FLOW GROWTH 1-YEAR PRIOR TO TRANSACTION	52.33%
AVERAGE NET CASH FLOW GROWTH 1-YEAR AFTER TRANSACTION	25.04%
AVERAGE NET CASH FLOW GROWTH IN THE SECOND YEAR AFTER TRANSACTION	-2.40%
AVERAGE TOTAL NET CASH FLOW GROWTH COMPARING THE TRANSACTION YEAR TO THE SECOND YEAR AFTER THE TRANSACTION	14.70%

SALES GROWTH	
AVERAGE NET SALES GROWTH 1-YEAR PRIOR TO TRANSACTION	23.65%
AVERAGE NET SALES GROWTH 1-YEAR AFTER TRANSACTION	22.24%
AVERAGE NET SALES GROWTH IN THE SECOND YEAR AFTER TRANSACTION	14.90%
AVERAGE TOTAL NET SALES GROWTH COMPARING THE TRANSACTION YEAR TO THE SECOND YEAR AFTER THE TRANSACTION	40.36%

EBITDA GROWTH	
AVERAGE EBITDA GROWTH 1-YEAR PRIOR TO TRANSACTION	30.56%
AVERAGE EBITDA GROWTH 1-YEAR AFTER TRANSACTION	30.77%
AVERAGE EBITDA GROWTH IN THE SECOND YEAR AFTER TRANSACTION	126.89%
AVERAGE TOTAL EBITDA GROWTH COMPARING THE TRANSACTION YEAR TO THE SECOND YEAR AFTER THE TRANSACTION	33.66%

SHAREHOLDER'S EQUITY GROWTH	
AVERAGE SHAREHOLDER'S EQUITY GROWTH 1-YEAR PRIOR TO TRANSACTION	30.67%
AVERAGE SHAREHOLDER'S EQUITY GROWTH 1-YEAR AFTER TRANSACTION	20.66%
AVERAGE SHAREHOLDER'S EQUITY GROWTH IN THE SECOND YEAR AFTER TRANSACTION	16.57%

AVERAGE TOTAL SHAREHOLDER'S EQUITY GROWTH COMPARING THE TRANSACTION YEAR TO THE SECOND YEAR AFTER THE TRANSACTION	40.28%
Sample Average Growth Rates	
Year-Over-Year Net Earnings/ Net Income/Income from Continuing Operations/ Total Sources of Cash from Continuing Operations Growth	10.54%
Net Cash Flows from Operating Activities	26.94%
Sales/Net Sales/Total Sales/Sales and Other Activities/Product Sales	20.65%
EBITDA/Operations Before Interest and Income Tax	58.16%
Total Shareholders'/Stockholders' Equity	25.26%

Table 13. Defense Industry Financial Performance

DEFENSE INDUSTRY FINANCIAL PERFORMANCE

Lockheed Martin (LMT)

Results of FY1993 Transactions

	1992	1993	1994	1995
Statement of Cash Flows ($'s in Millions)				
Net Earnings	$ 345	$ 450	$ 1,055	$ 682
Net Cash Flows from Operating Activities	$ 678	$ 640	$ 1,493	$ 1,292
Income Statement ($'s in Millions)				
Net Sales	$ 5,954	$ 9,436	$ 22,906	$ 22,853
EBITDA	$ 512	$ 725	$ 1,675	$ 1,089
Balance Sheet ($'s in Millions)				
Total Shareholders' Equity	$ 1,945	$ 2,877	$ 6,086	$ 6,433
Annual Capital Gain (Loss)	24.91%	20.37%	10.38%	59.89%
Sample Group Average Annual Capital Gain	23.46%	6.32%	9.31%	37.87%

Net Earnings Growth (Decline)	
% Change from 1992 to 1993	30.43%
% Change from 1993 to 1994	134.44%
% Change from 1994 to 1995	-35.36%
% Change from 1993 compared to 1995	51.56%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 1992 to 1993	-5.60%
% Change from 1993 to 1994	133.28%
% Change from 1994 to 1995	-13.46%
% Change from 1993 compared to 1995	101.88%

Growth (Decrease) in Net Sales	
% Change from 1992 to 1993	58.48%
% Change from 1993 to 1994	142.75%
% Change from 1994 to 1995	-0.23%
% Change from 1993 compared to 1995	142.19%

Growth (Decrease) in EBITDA	
% Change from 1992 to 1993	41.60%
% Change from 1993 to 1994	131.03%
% Change from 1994 to 1995	-34.99%
% Change from 1993 compared to 1995	50.21%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 1992 to 1993	47.92%
% Change from 1993 to 1994	111.54%

% Change from 1994 to 1995	5.70%
% Change from 1993 compared to 1995	123.60%

Results of FY1996 Transactions

	1995	1996	1997	1998
Statement of Cash Flows ($'s in Millions)				
Net Earnings	$ 682	$ 1,347	$ 1,300	$ 1,001
Net Cash Flows from Operating Activities	$ 1,292	$ 1,636	$ 1,208	$ 2,031
Income Statement ($'s in Millions)				
Net Sales	$ 22,853	$ 26,875	$ 28,069	$ 26,266
EBITDA	$ 1,089	$ 2,033	$ 1,937	$ 1,661
Balance Sheet ($'s in Millions)				
Total Shareholders' Equity	$ 6,433	$ 6,856	$ 5,176	$ 6,137
Annual Capital Gain (Loss)	59.89%	15.34%	9.20%	-9.26%
Sample Group Average Annual Capital Gain	37.87%	15.90%	10.69%	7.80%

Net Earnings Growth (Decline)	
% Change from 1995 to 1996	97.51%
% Change from 1996 to 1997	-3.49%
% Change from 1997 to 1998	-23.00%
% Change from 1996 compared to 1998	-25.69%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 1995 to 1996	26.63%
% Change from 1996 to 1997	-26.16%
% Change from 1997 to 1998	68.13%
% Change from 1996 compared to 1998	24.14%

Growth (Decrease) in Net Sales	
% Change from 1995 to 1996	17.60%
% Change from 1996 to 1997	4.44%
% Change from 1997 to 1998	-6.42%
% Change from 1996 compared to 1998	-2.27%

Growth (Decrease) in EBITDA	
% Change from 1995 to 1996	86.69%
% Change from 1996 to 1997	-4.72%
% Change from 1997 to 1998	-14.25%
% Change from 1996 compared to 1998	-18.30%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 1995 to 1996	6.58%
% Change from 1996 to 1997	-24.50%
% Change from 1997 to 1998	18.57%
% Change from 1996 compared to 1998	-10.49%

Results of FY1997 Transactions

	1996	1997	1998	1999
Statement of Cash Flows ($'s in Millions)				
Net Earnings	$ 1,347	$ 1,300	$ 1,001	$ 737
Net Cash Flows from Operating Activities	$ 1,636	$ 1,208	$ 2,031	$ 1,077
Income Statement ($'s in Millions)				
Net Sales	$ 26,875	$ 28,069	$ 26,266	$ 25,530
EBITDA	$ 2,033	$ 1,937	$ 1,661	$ 1,200
Balance Sheet ($'s in Millions)				
Total Shareholders' Equity	$ 6,856	$ 5,176	$ 6,137	$ 6,361
Annual Capital Gain (Loss)	15.34%	9.20%	-9.26%	-50.93%
Sample Group Average Annual Capital Gain	15.90%	10.69%	7.80%	-19.48%

Net Earnings Growth (Decline)	
% Change from 1996 to 1997	-3.49%
% Change from 1997 to 1998	-23.00%
% Change from 1998 to 1999	-26.37%
% Change from 1997 compared to 1999	-43.31%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 1996 to 1997	-26.16%
% Change from 1997 to 1998	68.13%
% Change from 1998 to 1999	-46.97%
% Change from 1997 compared to 1999	-10.84%

Growth (Decrease) in Net Sales	
% Change from 1996 to 1997	4.44%
% Change from 1997 to 1998	-6.42%
% Change from 1998 to 1999	-2.80%
% Change from 1997 compared to 1999	-9.05%

Growth (Decrease) in EBITDA	
% Change from 1996 to 1997	-4.72%
% Change from 1997 to 1998	-14.25%
% Change from 1998 to 1999	-27.75%
% Change from 1997 compared to 1999	-38.05%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 1996 to 1997	-24.50%
% Change from 1997 to 1998	18.57%
% Change from 1998 to 1999	3.65%
% Change from 1997 compared to 1999	22.89%

Results of FY1999 Transactions

	1998	1999	2000	2001
Statement of Cash Flows ($'s in Millions)				
Net Earnings	$ 1,001	$ 737	$ (424)	$ 79
Net Cash Flows from Operating Activities	$ 2,031	$ 1,077	$ 2,016	$ 1,825
Income Statement ($'s in Millions)				
Net Sales	$ 26,266	$ 25,530	$ 25,329	$ 23,990
EBITDA	$ 1,661	$ 1,200	$ 286	$ 188
Balance Sheet ($'s in Millions)				
Total Shareholders' Equity	$ 6,137	$ 6,361	$ 7,160	$ 6,443
Annual Capital Gain (Loss)	-9.26%	-50.93%	51.34%	34.12%
Sample Group Average Annual Capital Gain	7.80%	-19.48%	48.13%	12.84%

Net Earnings Growth (Decline)	
% Change from 1998 to 1999	-26.37%
% Change from 1999 to 2000	-157.53%
% Change from 2000 to 2001	-118.63%
% Change from 1999 compared to 2001	-89.28%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 1998 to 1999	-46.97%
% Change from 1999 to 2000	87.19%
% Change from 2000 to 2001	-9.47%
% Change from 1999 compared to 2001	69.45%

Growth (Decrease) in Net Sales	
% Change from 1998 to 1999	-2.80%
% Change from 1999 to 2000	-0.79%
% Change from 2000 to 2001	-5.29%
% Change from 1999 compared to 2001	-6.03%

Growth (Decrease) in EBITDA	
% Change from 1998 to 1999	-27.75%
% Change from 1999 to 2000	-76.17%
% Change from 2000 to 2001	-34.27%
% Change from 1999 compared to 2001	-84.33%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 1998 to 1999	3.65%
% Change from 1999 to 2000	12.56%
% Change from 2000 to 2001	-10.01%
% Change from 1999 compared to 2001	1.29%

Results of FY2003 Transactions

	2002	2003	2004
Statement of Cash Flows ($'s in Millions)			
Net Earnings	$ 533	$ 1,053	$ 1,266
Net Cash Flows from Operating Activities	$ 2,288	$ 1,809	$ 2,924
Income Statement ($'s in Millions)			
Net Sales	$ 26,578	$ 31,824	$ 35,526
EBITDA	$ 577	$ 1,532	$ 1,644
Balance Sheet ($'s in Millions)			
Total Shareholders' Equity	$ 5,865	$ 6,756	$ 7,021
Annual Capital Gain (Loss)	25.43%	-8.13%	9.36%
Sample Group Average Annual Capital Gain	2.56%	14.27%	18.92%

Net Earnings Growth (Decline)	
% Change from 2002 to 2003	97.56%
% Change from 2003 to 2004	20.23%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 2002 to 2003	-20.94%
% Change from 2003 to 2004	61.64%

Growth (Decrease) in Net Sales	
% Change from 2002 to 2003	19.74%
% Change from 2003 to 2004	11.63%

Growth (Decrease) in EBITDA	
% Change from 2002 to 2003	165.51%
% Change from 2003 to 2004	7.31%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 2002 to 2003	15.19%
% Change from 2003 to 2004	3.92%

Boeing Co (BA)

Results of FY1996 Transactions

	1995	1996	1997	1998
Statement of Cash Flows ($'s in Millions)				
Net Earnings	$ 393	$ 1,095	$ (178)	$ 1,120
Net Cash Flows from Operating Activities	$ 1,066	$ 2,223	$ 2,100	$ 2,367
Income Statement ($'s in Millions)				
Sales and Other Operating Revenues	$ 19,515	$ 22,681	$ 45,800	$ 56,154

Net Earnings Growth (Decline)	
% Change from 1995 to 1996	178.63%
% Change from 1996 to 1997	-116.26%
% Change from 1997 to 1998	-729.21%
% Change from 1996 compared to 1998	2.28%

Growth (Decrease) in Net Cash Flows from Operating Activities

EBITDA	$ 511	$ 1,641	$ 73	$ 1,850
Balance Sheet ($'s in Millions)				
Total Shareholders' Equity	$ 9,898	$ 10,941	$ 12,953	$ 12,316
Annual Capital Gain (Loss)	54.53%	31.70%	-5.63%	-32.29%
Sample Group Average Annual Capital Gain	37.87%	15.90%	10.69%	7.80%

% Change from 1995 to 1996	108.54%
% Change from 1996 to 1997	-5.53%
% Change from 1997 to 1998	12.71%
% Change from 1996 compared to 1998	6.48%

Growth (Decrease) in Sales and Other Activities	
% Change from 1995 to 1996	16.22%
% Change from 1996 to 1997	101.93%
% Change from 1997 to 1998	22.61%
% Change from 1996 compared to 1998	147.58%

Growth (Decrease) in EBITDA	
% Change from 1995 to 1996	221.14%
% Change from 1996 to 1997	-95.55%
% Change from 1997 to 1998	2434.25%
% Change from 1996 compared to 1998	12.74%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 1995 to 1996	10.54%
% Change from 1996 to 1997	18.39%
% Change from 1997 to 1998	-4.92%
% Change from 1996 compared to 1998	12.57%

General Dynamics (GD)

Results of FY1999 Transactions

	1998	1999	2000	2001
Statement of Cash Flows ($'s in Millions)				
Net Earnings	$ 364	$ 880	$ 901	$ 943
Net Cash Flows from Operating Activities	$ 370	$ 1,016	$ 1,071	$ 1,103
Income Statement ($'s in Millions)				
Net Sales	$ 4,970	$ 8,959	$ 10,356	$ 12,163

Net Earnings Growth (Decline)	
% Change from 1998 to 1999	141.76%
% Change from 1999 to 2000	2.39%
% Change from 2000 to 2001	4.66%
% Change from 1999 compared to 2001	7.16%

Growth (Decrease) in Net Cash Flows from Operating Activities

EBITDA	$ 549	$ 1,126	$ 1,262	$ 1,424
Balance Sheet ($'s in Millions)				
Total Shareholders' Equity	$ 2,219	$ 3,171	$ 3,820	$ 4,528
Annual Capital Gain (Loss)	32.69%	-9.00%	45.27%	6.37%
Sample Group Average Annual Capital Gain	7.80%	-19.48%	48.13%	12.84%

% Change from 1998 to 1999	174.59%
% Change from 1999 to 2000	5.41%
% Change from 2000 to 2001	2.99%
% Change from 1999 compared to 2001	8.56%
Growth (Decrease) in Net Sales	
% Change from 1998 to 1999	80.26%
% Change from 1999 to 2000	15.59%
% Change from 2000 to 2001	17.45%
% Change from 1999 compared to 2001	35.76%
Growth (Decrease) in EBITDA	
% Change from 1998 to 1999	105.10%
% Change from 1999 to 2000	12.08%
% Change from 2000 to 2001	12.84%
% Change from 1999 compared to 2001	26.47%
Growth (Decrease) in Total Shareholders' Equity	
% Change from 1998 to 1999	42.90%
% Change from 1999 to 2000	20.47%
% Change from 2000 to 2001	18.53%
% Change from 1999 compared to 2001	42.79%

Results of FY2000 Transactions

	1999	2000	2001	2002
Statement of Cash Flows ($'s in Millions)				
Net Earnings	$ 880	$ 901	$ 943	$ 1,051
Net Cash Flows from Operating Activities	$ 1,016	$ 1,071	$ 1,103	$ 1,125
Income Statement ($'s in Millions)				
Net Sales	$ 8,959	$ 10,356	$ 12,163	$ 13,829
EBITDA	$ 1,126	$ 1,262	$ 1,424	$ 1,584

Net Earnings Growth (Decline)	
% Change from 1999 to 2000	2.39%
% Change from 2000 to 2001	4.66%
% Change from 2001 to 2002	11.45%
% Change from 2000 compared to 2002	16.65%
Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 1999 to 2000	5.41%
% Change from 2000 to 2001	2.99%

Balance Sheet ($'s in Millions)					% Change from 2001 to 2002	1.99%
Total Shareholders' Equity	$ 3,171	$ 3,820	$ 4,528	$ 5,199	% Change from 2000 compared to 2002	5.04%
Annual Capital Gain (Loss)	-9.00%	45.27%	6.37%	4.35%	Growth (Decrease) in Net Sales	
Sample Group Average Annual Capital Gain	-19.48%	48.13%	12.84%	2.56%	% Change from 1999 to 2000	15.59%
					% Change from 2000 to 2001	17.45%
					% Change from 2001 to 2002	13.70%
					% Change from 2000 compared to 2002	33.54%
					Growth (Decrease) in EBITDA	
					% Change from 1999 to 2000	12.08%
					% Change from 2000 to 2001	12.84%
					% Change from 2001 to 2002	11.24%
					% Change from 2000 compared to 2002	25.52%
					Growth (Decrease) in Total Shareholders' Equity	
					% Change from 1999 to 2000	20.47%
					% Change from 2000 to 2001	18.53%
					% Change from 2001 to 2002	14.82%
					% Change from 2000 compared to 2002	36.10%

Results of FY2001 Transactions

	2000	**2001**	**2002**	**2003**	Net Earnings Growth (Decline)	
Statement of Cash Flows ($'s in Millions)					% Change from 2000 to 2001	4.66%
Net Earnings	$ 901	$ 943	$ 1,051	$ 997	% Change from 2001 to 2002	11.45%
Net Cash Flows from Operating Activities	$ 1,071	$ 1,103	$ 1,125	$ 1,723	% Change from 2002 to 2003	-5.14%
					% Change from 2001 compared to 2003	5.73%
Income Statement ($'s in Millions)						
Net Sales	$ 10,356	$ 12,163	$ 13,829	$ 16,617	Growth (Decrease) in Net Cash Flows from Operating Activities	
EBITDA	$ 1,262	$ 1,424	$ 1,584	$ 1,372	% Change from 1999 to 2000	2.99%
					% Change from 2000 to 2001	1.99%
Balance Sheet ($'s in Millions)					% Change from 2001 to 2002	53.16%
Total Shareholders' Equity	$ 3,820	$ 4,528	$ 5,199	$ 5,921	% Change from 2000 compared to 2002	56.21%

Annual Capital Gain (Loss)	45.27%	6.37%	4.35%	18.96%
Sample Group Average Annual Capital Gain	48.13%	12.84%	2.56%	14.27%

Growth (Decrease) in Net Sales	
% Change from 1999 to 2000	17.45%
% Change from 2000 to 2001	13.70%
% Change from 2001 to 2002	20.16%
% Change from 2000 compared to 2002	36.62%

Growth (Decrease) in EBITDA	
% Change from 1999 to 2000	12.84%
% Change from 2000 to 2001	11.24%
% Change from 2001 to 2002	-13.38%
% Change from 2000 compared to 2002	-3.65%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 1999 to 2000	18.53%
% Change from 2000 to 2001	14.82%
% Change from 2001 to 2002	13.89%
% Change from 2000 compared to 2002	30.76%

Results of FY2002 Transactions

	2001	**2002**	**2003**	**2004**
Statement of Cash Flows ($'s in Millions)				
Net Earnings	$ 943	$ 1,051	$ 997	$ 1,203
Net Cash Flows from Operating Activities	$ 1,103	$ 1,125	$ 1,723	$ 1,802
Income Statement ($'s in Millions)				
Net Sales	$ 12,163	$ 13,829	$ 16,617	$ 19,178
EBITDA	$ 1,424	$ 1,584	$ 1,372	$ 1,785
Balance Sheet ($'s in Millions)				
Total Shareholders' Equity	$ 4,528	$ 5,199	$ 5,921	$ 7,189
Annual Capital Gain (Loss)	6.37%	4.35%	18.96%	15.21%

Net Earnings Growth (Decline)	
% Change from 2001 to 2002	11.45%
% Change from 2002 to 2003	-5.14%
% Change from 2003 to 2004	20.66%
% Change from 2002 compared to 2004	14.46%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 2001 to 2002	1.99%
% Change from 2002 to 2003	53.16%
% Change from 2003 to 2004	4.59%
% Change from 2002 compared to 2004	60.18%

Growth (Decrease) in Net Sales

	2001	2002	2003	2004
Sample Group Average Annual Capital Gain	12.84%	2.56%	14.27%	18.92%

% Change from 2001 to 2002	13.70%
% Change from 2002 to 2003	20.16%
% Change from 2003 to 2004	15.41%
% Change from 2002 compared to 2004	38.68%

Growth (Decrease) in EBITDA

% Change from 2001 to 2002	11.24%
% Change from 2002 to 2003	-13.38%
% Change from 2003 to 2004	30.10%
% Change from 2002 compared to 2004	12.69%

Growth (Decrease) in Total Shareholders' Equity

% Change from 2001 to 2002	14.82%
% Change from 2002 to 2003	13.89%
% Change from 2003 to 2004	21.42%
% Change from 2002 compared to 2004	38.28%

Goodrich Corp (GR)

Results of FY2002 Transactions

	2001	2002	2003	2004
Statement of Cash Flows ($'s in Millions)				
Income from Continuing Operations	$ 179.6	$ 165.9	$ 38.5	$ 156.0
Net Cash Flows from Operating Activities	$ 382.6	$ 539.2	$ 553.1	$ 415.6
Income Statement ($'s in Millions)				
Sales	$ 4,184.5	$ 3,910.2	$ 4,382.9	$ 4,724.5
EBITDA	$ 281.7	$ 269.6	$ 69.2	$ 199.3
Balance Sheet ($'s in Millions)				
Total Shareholders' Equity	$ 1,361.4	$ 932.9	$ 1,193.5	$ 1,342.9
Annual Capital Gain (Loss)	-16.70%	-27.79%	56.88%	11.02%

Growth (Decline) in Income from Continuing Operations

% Change from 2001 to 2002	-7.63%
% Change from 2002 to 2003	-76.79%
% Change from 2003 to 2004	305.19%
% Change from 2002 compared to 2004	-5.97%

Growth (Decrease) in Net Cash Flows from Operating Activities

% Change from 2001 to 2002	40.93%
% Change from 2002 to 2003	2.58%
% Change from 2003 to 2004	-24.86%
% Change from 2002 compared to 2004	-22.92%

Growth (Decrease) in Sales

Sample Group Average Annual Capital Gain	12.84%	2.56%	14.27%	18.92%

% Change from 2001 to 2002	-6.56%
% Change from 2002 to 2003	12.09%
% Change from 2003 to 2004	7.79%
% Change from 2002 compared to 2004	20.83%

Growth (Decrease) in EBITDA	
% Change from 2001 to 2002	-4.30%
% Change from 2002 to 2003	-74.33%
% Change from 2003 to 2004	188.01%
% Change from 2002 compared to 2004	-26.08%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 2001 to 2002	-31.47%
% Change from 2002 to 2003	27.93%
% Change from 2003 to 2004	12.52%
% Change from 2002 compared to 2004	43.95%

Results of FY2003 Transactions

	2002	2003	2004
Statement of Cash Flows ($'s in Millions)			
Income from Continuing Operations	$ 165.9	$ 38.5	$ 156.0
Net Cash Flows from Operating Activities	$ 539.2	$ 553.1	$ 415.6
Income Statement ($'s in Millions)			
Sales	$ 3,910.2	$ 4,382.9	$ 4,724.5
EBITDA	$ 269.6	$ 69.2	$ 119.3
Balance Sheet ($'s in Millions)			
Total Shareholders' Equity	$ 932.9	$ 1,193.5	$ 1,342.9
Annual Capital Gain (Loss)	-27.79%	56.88%	11.02%
Sample Group Average Annual Capital Gain	2.56%	14.27%	18.92%

Growth (Decline) in Income from Continuing Operations	
% Change from 2002 to 2003	-76.79%
% Change from 2003 to 2004	305.19%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 2002 to 2003	2.58%
% Change from 2003 to 2004	-24.86%

Growth (Decrease) in Sales	
% Change from 2002 to 2003	12.09%
% Change from 2003 to 2004	7.79%

Growth (Decrease) in EBITDA	
% Change from 2002 to 2003	-74.33%
% Change from 2003 to 2004	72.40%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 2002 to 2003	27.93%
% Change from 2003 to 2004	12.52%

Northrop Grumman (NOC)
Results of FY1994 Transactions

	1993	1994	1995	1996
Statement of Cash Flows ($'s in Millions)				
Total Sources of Cash from Continuing Operations	$ 4,963	$ 7,413	$ 6,700	$ 8,077
Net Cash Flows from Operating Activities	$ 380	$ 441	$ 744	$ 701
Income Statement ($'s in Millions)				
Product Sales	$ 5,063	$ 6,711	$ 6,818	$ 8,071
Income (Loss) from Continuing Operations Before Income Taxes	$ 170	$ 65	$ 409	$ 384
Balance Sheet ($'s in Millions)				
Total Shareholders' Equity	$ 1,322	$ 1,290	$ 1,459	$ 2,128
Annual Capital Gain (Loss)	11.16%	13.74%	44.46%	27.01%
Sample Group Average Annual Capital Gain	6.32%	9.31%	37.87%	15.90%

Growth (Decrease) in Total Sources of Cash from Continuing Operations	
% Change from 1993 to 1994	49.37%
% Change from 1994 to 1995	-9.62%
% Change from 1995 to 1996	20.55%
% Change from 1994 compared to 1996	8.96%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 1993 to 1994	16.05%
% Change from 1994 to 1995	68.71%
% Change from 1995 to 1996	-5.78%
% Change from 1994 compared to 1996	58.96%

Growth (Decrease) in Product Sales	
% Change from 1993 to 1994	32.55%
% Change from 1994 to 1995	1.59%
% Change from 1995 to 1996	18.38%
% Change from 1994 compared to 1996	20.27%

Growth (Decrease) in EBITDA	
% Change from 1993 to 1994	-61.76%
% Change from 1994 to 1995	529.23%
% Change from 1995 to 1996	-6.11%

% Change from 1994 compared to 1996	490.77%

Growth (Decrease) in Total Shareholders' Equity

% Change from 1993 to 1994	-2.42%
% Change from 1994 to 1995	13.10%
% Change from 1995 to 1996	45.85%
% Change from 1994 compared to 1996	64.96%

Results of FY1999 Transactions

	1998	1999	2000	2001
Statement of Cash Flows ($'s in Millions)				
Total Sources of Cash from Continuing Operations	$ 8,816	$ 9,241	$ 8,483	$ 14,534
Net Cash Flows from Operating Activities	$ 244	$ 1,207	$ 1,010	$ 817
Income Statement ($'s in Millions)				
Net/Product Sales	$ 8,902	$ 8,995	$ 6,133	$ 10,664
Income (Loss) from Continuing Operations Before Income Taxes	$ 312	$ 762	$ 975	$ 699
Balance Sheet ($'s in Millions)				
Total Shareholders' Equity	$ 2,850	$ 3,257	$ 3,919	$ 7,391
Annual Capital Gain (Loss)	-33.62%	-24.23%	53.21%	23.56%
Sample Group Average Annual Capital Gain	7.80%	-19.48%	48.13%	12.84%

Growth (Decrease) in Total Sources of Cash from Continuing Operations

% Change from 1998 to 1999	4.82%
% Change from 1999 to 2000	-8.20%
% Change from 2000 to 2001	71.33%
% Change from 1999 compared to 2001	57.28%

Growth (Decrease) in Net Cash Flows from Operating Activities

% Change from 1998 to 1999	394.67%
% Change from 1999 to 2000	-16.32%
% Change from 2000 to 2001	-19.11%
% Change from 1999 compared to 2001	-32.31%

Growth (Decrease) in Product Sales

% Change from 1998 to 1999	1.04%
% Change from 1999 to 2000	-31.82%
% Change from 2000 to 2001	73.88%
% Change from 1999 compared to 2001	18.55%

Growth (Decrease) in EBITDA

% Change from 1998 to 1999	144.23%
% Change from 1999 to 2000	27.95%
% Change from 2000 to 2001	-28.31%

% Change from 1999 compared to 2001	-8.27%

Growth (Decrease) in Total Shareholders' Equity

% Change from 1998 to 1999	14.28%
% Change from 1999 to 2000	20.33%
% Change from 2000 to 2001	88.59%
% Change from 1999 compared to 2001	126.93%

Results of FY2001 Transactions

	2000	2001	2002	2003
Statement of Cash Flows ($'s in Millions)				
Total Sources of Cash from Continuing Operations	$ 8,483	$ 14,534	$ 18,467	$ 26,576
Net Cash Flows from Operating Activities	$ 1,010	$ 817	$ 1,689	$ 798
Income Statement ($'s in Millions)				
Net/Product Sales	$ 6,133	$ 10,664	$ 13,638	$ 18,350
Income (Loss) from Continuing Operations Before Income Taxes	$ 975	$ 699	$ 1,009	$ 1,131
	$ 1,131	$ 1,009	$ 699	$ 975
Balance Sheet ($'s in Millions)				
Total Shareholders' Equity	$ 3,919	$ 7,391	$ 14,322	$ 15,785
Annual Capital Gain (Loss)	53.21%	23.56%	0.25%	-0.12%
Sample Group Average Annual Capital Gain	48.13%	12.84%	2.56%	14.27%

Growth (Decrease) in Total Sources of Cash from Continuing Operations

% Change from 2000 to 2001	71.33%
% Change from 2001 to 2002	27.06%
% Change from 2002 to 2003	43.91%
% Change from 2001 compared to 2003	82.85%

Growth (Decrease) in Net Cash Flows from Operating Activities

% Change from 2000 to 2001	-19.11%
% Change from 2001 to 2002	106.73%
% Change from 2002 to 2003	-52.75%
% Change from 2001 compared to 2003	-2.33%

Growth (Decrease) in Product Sales

% Change from 2000 to 2001	73.88%
% Change from 2001 to 2002	27.89%
% Change from 2002 to 2003	34.55%
% Change from 2001 compared to 2003	72.07%

Growth (Decrease) in EBITDA

% Change from 2000 to 2001	-28.31%
% Change from 2001 to 2002	44.35%
% Change from 2002 to 2003	12.09%

% Change from 2001 compared to 2003	61.80%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 2000 to 2001	88.59%
% Change from 2001 to 2002	93.78%
% Change from 2002 to 2003	10.22%
% Change from 2001 compared to 2003	113.57%

Results of FY2002 Transactions

	2001	2002	2003	2004
Statement of Cash Flows ($'s in Millions)				
Total Sources of Cash from Continuing Operations	$ 14,534	$ 18,467	$ 26,576	$ 29,856
Net Cash Flows from Operating Activities	$ 817	$ 1,689	$ 798	$ 1,936
Income Statement ($'s in Millions)				
Net/Product Sales	$ 10,664	$ 13,638	$ 18,350	$ 20,106
Income (Loss) from Continuing Operations Before Income Taxes	$ 699	$ 1,009	$ 1,131	$ 1,615
Balance Sheet ($'s in Millions)				
Total Shareholders' Equity	$ 7,391	$ 14,322	$ 15,785	$ 16,700
Annual Capital Gain (Loss)	23.56%	0.25%	-0.12%	13.73%
Sample Group Average Annual Capital Gain	12.84%	2.56%	14.27%	18.92%

Growth (Decrease) in Total Sources of Cash from Continuing Operations	
% Change from 2001 to 2002	27.06%
% Change from 2002 to 2003	43.91%
% Change from 2003 to 2004	12.34%
% Change from 2002 compared to 2004	61.67%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 2001 to 2002	106.73%
% Change from 2002 to 2003	-52.75%
% Change from 2003 to 2004	142.61%
% Change from 2002 compared to 2004	14.62%

Growth (Decrease) in Product Sales	
% Change from 2001 to 2002	27.89%
% Change from 2002 to 2003	34.55%
% Change from 2003 to 2004	9.57%
% Change from 2002 compared to 2004	47.43%

Growth (Decrease) in EBITDA	
% Change from 2001 to 2002	44.35%
% Change from 2002 to 2003	12.09%
% Change from 2003 to 2004	42.79%

% Change from 2002 compared to 2004	60.06%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 2001 to 2002	93.78%
% Change from 2002 to 2003	10.22%
% Change from 2003 to 2004	5.80%
% Change from 2002 compared to 2004	16.60%

Raytheon Co (RTN)

Results of FY1992 Transactions

	1991	1992	1993	1994
Statement of Cash Flows ($'s in Millions)				
Net Income (Loss)	$ 591,762	$ 635,073	$ 692,991	$ 596,876
Net Cash Flows from Operating Activities	$ 748,574	$ 691,525	$ 950,057	$ 1,088,618
Income Statement ($'s in Thousands)				
Net Sales	$ 9,274,235	$ 9,058,216	$ 9,201,197	$ 10,012,855
EBITDA	$ 872,742	$ 955,967	$ 1,047,347	$ 899,939
Balance Sheet ($'s in Thousands)				
Total Shareholders' Equity	$ 3,323,404	$ 3,843,234	$ 4,297,860	$ 3,928,168
Annual Capital Gain (Loss)	18.52%	22.20%	26.95%	-2.41%
Sample Group Average Annual Capital Gain	34.60%	23.46%	6.32%	9.31%

Net Income Growth (Decline)	
% Change from 1991 to 1992	7.32%
% Change from 1992 to 1993	9.12%
% Change from 1993 to 1994	-13.87%
% Change from 1992 compared to 1994	-6.01%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 1991 to 1992	-7.62%
% Change from 1992 to 1993	37.39%
% Change from 1993 to 1994	14.58%
% Change from 1992 compared to 1994	57.42%

Growth (Decrease) in Net Sales	
% Change from 1991 to 1992	-2.33%
% Change from 1992 to 1993	1.58%
% Change from 1993 to 1994	8.82%
% Change from 1992 compared to 1994	10.54%

Growth (Decrease) in EBITDA	
% Change from 1991 to 1992	9.54%
% Change from 1992 to 1993	9.56%
% Change from 1993 to 1994	-14.07%

% Change from 1992 compared to 1994	-5.86%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 1991 to 1992	15.64%
% Change from 1992 to 1993	11.83%
% Change from 1993 to 1994	-8.60%
% Change from 1992 compared to 1994	2.21%

Results of FY1994 Transactions

	1993	1994	1995	1996
Statement of Cash Flows ($'s in Millions)				
Net Income (Loss)	$ 692,991	$ 596,876	$ 792,488	$ 761,151
Net Cash Flows from Operating Activities	$ 950,057	$ 1,088,618	$ 1,134,169	$ 291,195
Income Statement ($'s in Thousands)				
Net Sales	$ 9,201,197	$ 10,012,855	$ 11,715,597	$ 12,330,538
EBITDA	$ 1,047,347	$ 899,939	$ 1,191,683	$ 1,083,462
Balance Sheet ($'s in Thousands)				
Total Shareholders' Equity	$ 4,297,860	$ 3,928,168	$ 4,291,964	$ 4,598,010
Annual Capital Gain (Loss)	26.95%	-2.41%	40.26%	3.78%
Sample Group Average Annual Capital Gain	6.32%	9.31%	37.87%	15.90%

Net Income Growth (Decline)	
% Change from 1993 to 1994	-13.87%
% Change from 1994 to 1995	32.77%
% Change from 1995 to 1996	-3.95%
% Change from 1994 compared to 1996	27.52%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 1993 to 1994	14.58%
% Change from 1994 to 1995	4.18%
% Change from 1995 to 1996	-74.33%
% Change from 1994 compared to 1996	-73.25%

Growth (Decrease) in Net Sales	
% Change from 1993 to 1994	8.82%
% Change from 1994 to 1995	17.01%
% Change from 1995 to 1996	5.25%
% Change from 1994 compared to 1996	23.15%

Growth (Decrease) in EBITDA	
% Change from 1993 to 1994	-14.07%
% Change from 1994 to 1995	32.42%
% Change from 1995 to 1996	-9.08%
% Change from 1994 compared to 1996	20.39%

Growth (Decrease) in Total Shareholders' Equity

% Change from 1993 to 1994	-8.60%
% Change from 1994 to 1995	9.26%
% Change from 1995 to 1996	7.13%
% Change from 1994 compared to 1996	17.05%

Results of FY1997 Transactions

	1996	1997	1998	1999
Statement of Cash Flows ($'s in Millions)				
Net Income (Loss)	$ 761,151	$ 527,000	$ 864,000	$ 404,000
Net Cash Flows from Operating Activities	$ 291,295	$ 963,000	$ 820,000	$ (317,000)
Income Statement ($'s in Thousands)				
Net Sales	$ 12,330,538	$ 13,673,000	$ 19,530,000	$ 19,841,000
EBITDA	$ 1,083,462	$ 790,000	$ 1,467,000	$ 828,000
Balance Sheet ($'s in Thousands)				
Total Shareholders' Equity	$ 4,598,010	$ 10,425,000	$ 10,856,000	$ 10,959,000
Annual Capital Gain (Loss)	3.78%	7.35%	10.49%	-49.69%
Sample Group Average Annual Capital Gain	15.90%	10.69%	7.80%	-19.48%

Net Income Growth (Decline)

% Change from 1996 to 1997	-30.76%
% Change from 1997 to 1998	63.95%
% Change from 1998 to 1999	-53.24%
% Change from 1997 compared to 1999	-23.34%

Growth (Decrease) in Net Cash Flows from Operating Activities

% Change from 1993 to 1994	230.59%
% Change from 1994 to 1995	-14.85%
% Change from 1995 to 1996	-138.66%
% Change from 1994 compared to 1996	-132.92%

Growth (Decrease) in Net Sales

% Change from 1993 to 1994	10.89%
% Change from 1994 to 1995	42.84%
% Change from 1995 to 1996	1.59%
% Change from 1994 compared to 1996	45.11%

Growth (Decrease) in EBITDA

% Change from 1993 to 1994	-27.09%
% Change from 1994 to 1995	85.70%
% Change from 1995 to 1996	-43.56%
% Change from 1994 compared to 1996	4.81%

Growth (Decrease) in Total Shareholders' Equity

% Change from 1993 to 1994	126.73%

% Change from 1994 to 1995	4.13%
% Change from 1995 to 1996	0.95%
% Change from 1994 compared to 1996	5.12%

Results of FY2003 Transactions

	2002	2003	2004
Statement of Cash Flows ($'s in Millions)			
Net Income (Loss)	$ 755,000	$ 535,000	$ 439,000
Net Cash Flows from Operating Activities	$ 1,039,000	$ 1,569,000	$ 2,071,000
Income Statement ($'s in Thousands)			
Net Sales	$ 16,760,000	$ 18,109,000	$ 20,245,000
EBITDA	$ 1,074,000	$ 762,000	$ 579,000
Balance Sheet ($'s in Thousands)			
Total Shareholders' Equity	$ 8,870,000	$ 9,162,000	$ 10,551,000
Annual Capital Gain (Loss)	0.86%	0.53%	27.44%
Sample Group Average Annual Capital Gain	2.56%	14.27%	18.92%

Net Income Growth (Decline)	
% Change from 2002 to 2003	-29.14%
% Change from 2003 to 2004	-17.94%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 2002 to 2003	51.01%
% Change from 2003 to 2004	31.99%

Growth (Decrease) in Net Sales	
% Change from 2002 to 2003	8.05%
% Change from 2003 to 2004	11.80%

Growth (Decrease) in EBITDA	
% Change from 2002 to 2003	-29.05%
% Change from 2003 to 2004	-24.02%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 2002 to 2003	3.29%
% Change from 2003 to 2004	15.16%

L-3 Communications Holdings (LLL)

Results of FY2002 Transactions

	2001	2002	2003	2004
Statement of Cash Flows ($'s in Millions)				
Net Income (Loss)	$ 115,458	$ 178,097	$ 277,640	$ 381,880
Net Cash Flows from Operating Activities	$ 172,968	$ 318,460	$ 456,063	$ 620,671

Growth (Decrease) in Net Income	
% Change from 2001 to 2002	54.25%
% Change from 2002 to 2003	55.89%
% Change from 2003 to 2004	37.55%

% Change from 2002 compared to 2004	114.42%

Income Statement ($'s in Thousands)

Total Sales	$ 2,347,422	$ 4,011,229	$ 5,061,594	$ 6,896,997
EBITDA	$ 275,330	$ 453,979	$ 581,021	$ 748,619

Balance Sheet ($'s in Thousands)

Total Shareholders' Equity	$ 1,213,892	$ 2,202,202	$ 2,574,496	$ 3,799,761
Annual Capital Gain (Loss)	22.61%	5.44%	19.56%	37.81%
Sample Group Average Annual Capital Gain	12.84%	2.56%	14.27%	18.92%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 2001 to 2002	84.11%
% Change from 2002 to 2003	43.21%
% Change from 2003 to 2004	36.09%
% Change from 2002 compared to 2004	94.90%

Growth (Decrease) in Total Sales	
% Change from 2001 to 2002	70.88%
% Change from 2002 to 2003	26.19%
% Change from 2003 to 2004	36.26%
% Change from 2002 compared to 2004	71.94%

Growth (Decrease) in EBITDA	
% Change from 2001 to 2002	64.89%
% Change from 2002 to 2003	27.98%
% Change from 2003 to 2004	28.85%
% Change from 2002 compared to 2004	64.90%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 2001 to 2002	81.42%
% Change from 2002 to 2003	16.91%
% Change from 2003 to 2004	47.59%
% Change from 2002 compared to 2004	72.54%

Results of FY2003 Transactions

Statement of Cash Flows ($'s in Millions)	**2002**	**2003**	**2004**
Net Income (Loss)	$ 178,097	$ 277,640	$ 381,880
Net Cash Flows from Operating Activities	$ 318,460	$ 456,063	$ 620,671

Growth (Decline) in Net Income	
% Change from 2002 to 2003	55.89%
% Change from 2003 to 2004	37.55%

Growth (Decrease) in Net Cash Flows from Operating Activities

Income Statement ($'s in Thousands)				% Change from 2002 to 2003	43.21%
Total Sales	$ 4,011,229	$ 5,061,594	$ 6,896,997	% Change from 2003 to 2004	36.09%
EBITDA	$ 453,979	$ 581,021	$ 748,619		
				Growth (Decrease) in Total Sales	
Balance Sheet ($'s in Thousands)				% Change from 2002 to 2003	26.19%
Total Shareholders' Equity	$ 2,202,202	$ 2,574,496	$ 3,799,761	% Change from 2003 to 2004	36.26%
Annual Capital Gain (Loss)	5.44%	19.56%	37.81%	Growth (Decrease) in EBITDA	
Sample Group Average Annual Capital Gain	2.56%	14.27%	18.92%	% Change from 2002 to 2003	27.98%
				% Change from 2003 to 2004	28.85%
				Growth (Decrease) in Total Shareholders' Equity	
				% Change from 2002 to 2003	16.91%
				% Change from 2003 to 2004	47.59%

Alliant Techsystems (ATK)

Results of FY2002 Transactions

	2001	2002	2003	2004	Growth (Decrease) in Net Income	
Statement of Cash Flows ($'s in Millions)					% Change from 2001 to 2002	2.07%
Net Income (Loss)	$ 67,921	$ 69,327	$ 124,287	$ 162,305	% Change from 2002 to 2003	79.28%
Net Cash Flows from Operating Activities	$ 74,620	$ 162,052	$ 196,577	$ 179,801	% Change from 2003 to 2004	30.59%
					% Change from 2002 compared to 2004	134.12%
Income Statement ($'s in Thousands)						
Sales	$ 1,141,949	$ 1,801,605	$ 2,172,135	$ 2,366,193	Growth (Decrease) in Net Cash Flows from Operating Activities	
Income (Loss) from Operations Before Interest and Income Tax	$ 136,094	$ 223,682	$ 275,543	$ 277,063	% Change from 2001 to 2002	117.17%
					% Change from 2002 to 2003	21.30%
Balance Sheet ($'s in Thousands)					% Change from 2003 to 2004	-8.53%
Total Stockholders' Equity	$ 198,332	$ 556,801	$ 477,924	$ 564,200	% Change from 2002 compared to 2004	10.95%
Annual Capital Gain (Loss)	61.33%	23.46%	-3.50%	14.60%	Growth (Decrease) in Sales	
Sample Group Average Annual Capital Gain	12.84%	2.56%	14.27%	18.92%	% Change from 2001 to 2002	57.77%

% Change from 2002 to 2003	20.57%
% Change from 2003 to 2004	8.93%
% Change from 2002 compared to 2004	31.34%

Growth (Decrease) in Income (Loss) from Operations Before Interest and Income Tax	
% Change from 2001 to 2002	64.36%
% Change from 2002 to 2003	23.19%
% Change from 2003 to 2004	0.55%
% Change from 2002 compared to 2004	23.86%

Growth (Decrease) in Total Stockholders' Equity	
% Change from 2001 to 2002	180.74%
% Change from 2002 to 2003	-14.17%
% Change from 2003 to 2004	18.05%
% Change from 2002 compared to 2004	1.33%

Results of FY2003 Transactions

	2002	2003	2004	2005
Statement of Cash Flows ($'s in Millions)				
Net Income (Loss)	$ 69,327	$ 124,287	$ 162,305	$ 153,540
Net Cash Flows from Operating Activities	$ 162,052	$ 196,577	$ 179,801	$ 196,055
Income Statement ($'s in Thousands)				
Sales	$ 1,801,605	$ 2,172,135	$ 2,366,193	$ 2,801,129
Income (Loss) from Operations Before Interest and Income Tax	$ 223,682	$ 275,543	$ 277,063	$ 284,992
Balance Sheet ($'s in Thousands)				
Total Stockholders' Equity	$ 556,801	$ 477,924	$ 564,200	$ 686,359
Annual Capital Gain (Loss)	23.46%	-3.50%	14.60%	13.77%
Sample Group Average Annual Capital Gain	2.56%	14.27%	18.92%	10.59%

Growth (Decrease) in Net Income	
% Change from 2002 to 2003	79.28%
% Change from 2003 to 2004	30.59%
% Change from 2004 to 2005	-5.40%
% Change from 2003 compared to 2005	23.54%

Growth (Decrease) in Net Cash Flows from Operating Activities	
% Change from 2002 to 2003	21.30%
% Change from 2003 to 2004	-8.53%
% Change from 2004 to 2005	9.04%
% Change from 2003 compared to 2005	-0.27%

Growth (Decrease) in Sales	
% Change from 2002 to 2003	20.57%
% Change from 2003 to 2004	8.93%

% Change from 2004 to 2005	18.38%
% Change from 2003 compared to 2005	28.96%

Growth (Decrease) in Income (Loss) from Operations Before Interest and Income Tax

% Change from 2002 to 2003	23.19%
% Change from 2003 to 2004	0.55%
% Change from 2004 to 2005	2.86%
% Change from 2003 compared to 2005	3.43%

Growth (Decrease) in Total Stockholders' Equity

% Change from 2002 to 2003	-14.17%
% Change from 2003 to 2004	18.05%
% Change from 2004 to 2005	21.65%
% Change from 2003 compared to 2005	43.61%

Results of FY2004 Transactions

	2003	2004	2005
Statement of Cash Flows ($'s in Millions)			
Net Income (Loss)	$ 124,287	$ 162,305	$ 153,540
Net Cash Flows from Operating Activities	$ 196,577	$ 179,801	$ 196,055
Income Statement ($'s in Thousands)			
Sales	$ 2,172,135	$ 2,366,193	$ 2,801,129
Income (Loss) from Operations Before Interest and Income Tax	$ 275,543	$ 277,063	$ 284,992
Balance Sheet ($'s in Thousands)			
Total Stockholders' Equity	$ 477,924	$ 564,200	$ 686,359
Annual Capital Gain (Loss)	-3.50%	14.60%	13.77%
Sample Group Average Annual Capital Gain	14.27%	18.92%	10.59%

Growth (Decline) in Net Income

% Change from 2003 to 2004	30.59%
% Change from 2004 to 2005	-5.40%

Growth (Decrease) in Net Cash Flows from Operating Activities

% Change from 2003 to 2004	-8.53%
% Change from 2004 to 2005	9.04%

Growth (Decrease) in Sales

% Change from 2003 to 2004	8.93%
% Change from 2004 to 2005	18.38%

Growth (Decrease) in Income (Loss) from Operations Before Interest and Income Tax

% Change from 2003 to 2004	0.55%
% Change from 2004 to 2005	2.86%

Growth (Decrease) in Total Shareholders' Equity	
% Change from 2003 to 2004	18.05%
% Change from 2004 to 2005	21.65%

Source: Thesis Author

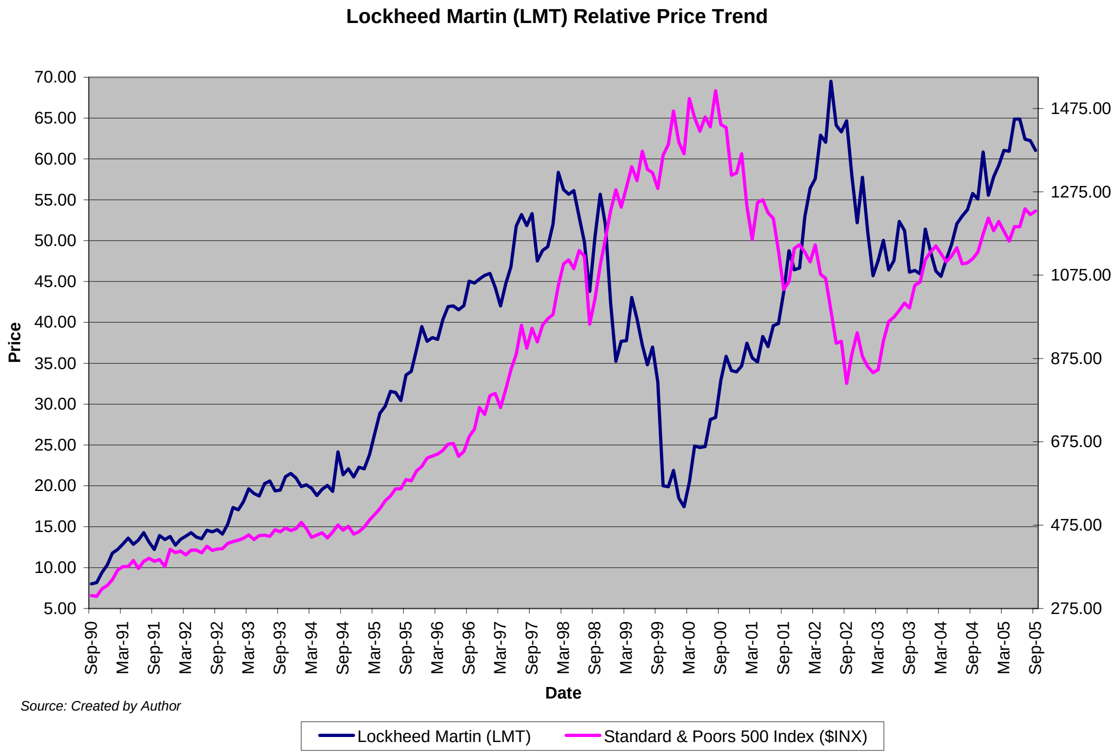

Figure 2. Lockheed Martin (LMT) Relative Price Trend from 1990 – 2005

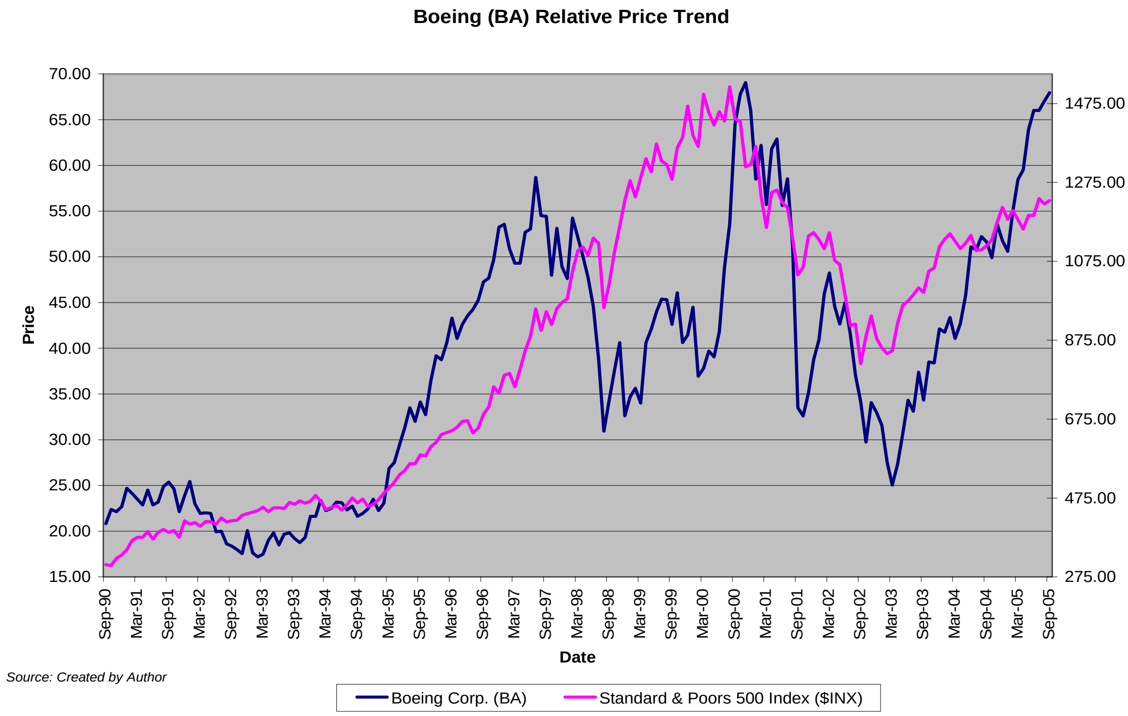

Figure 3. Boeing (BA) Relative Price Trend from 1990 – 2005

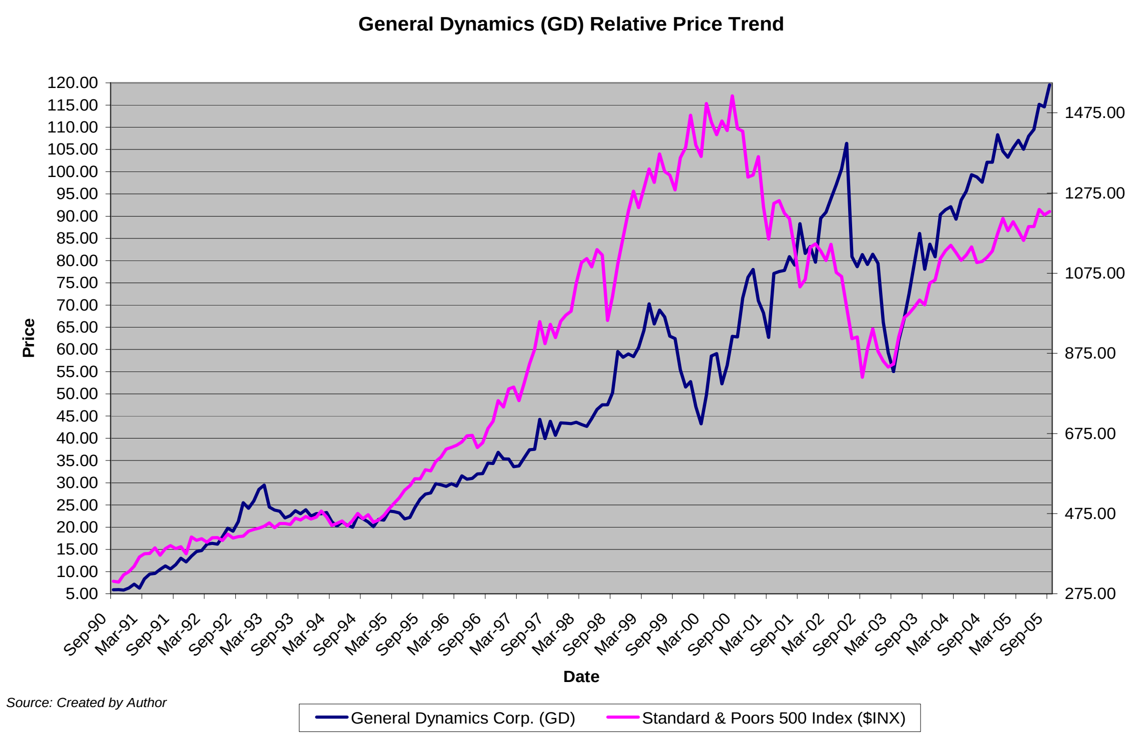

Figure 4. General Dynamics (GD) Relative Price Trend from 1990 – 2005

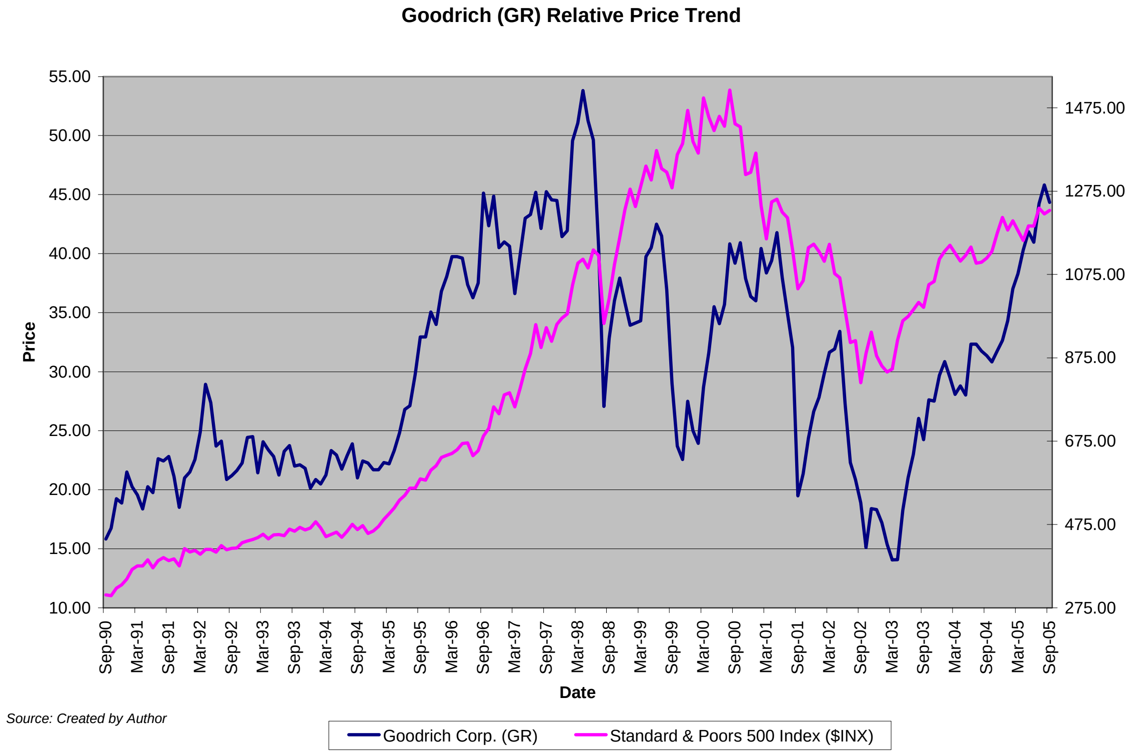

Figure 5. Goodrich (GR) Relative Price Trend from 1990 – 2005

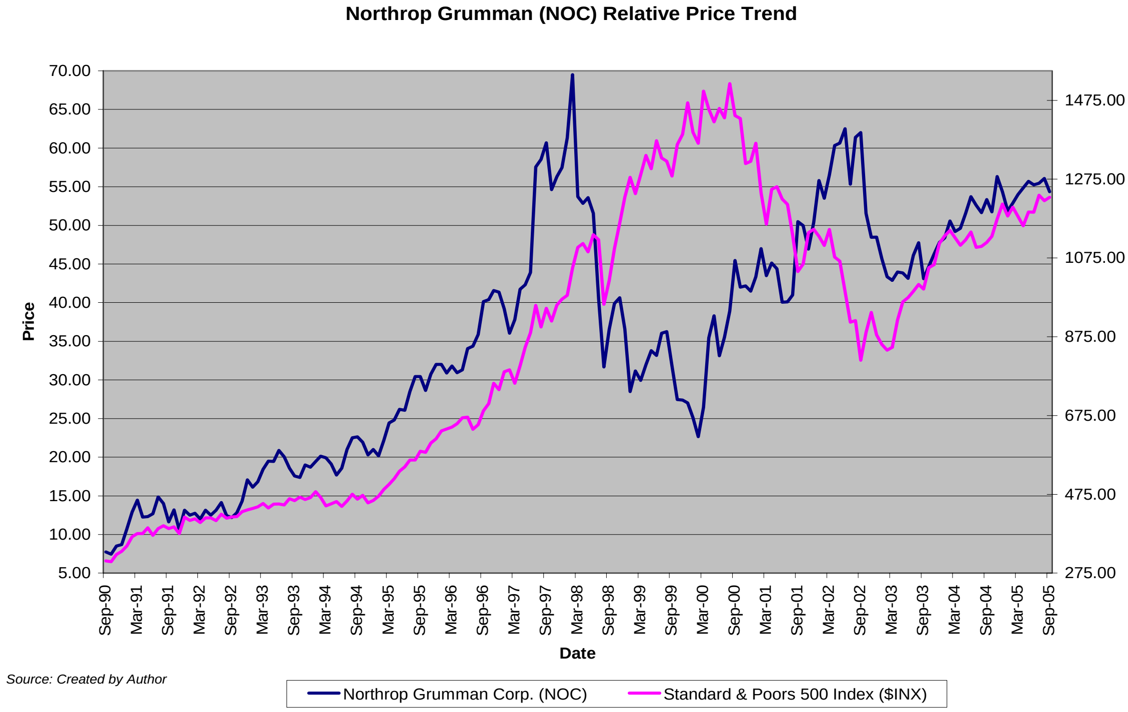

Figure 6. Northrop Grumman (NOC) Relative Price Trend from 1990 – 2005

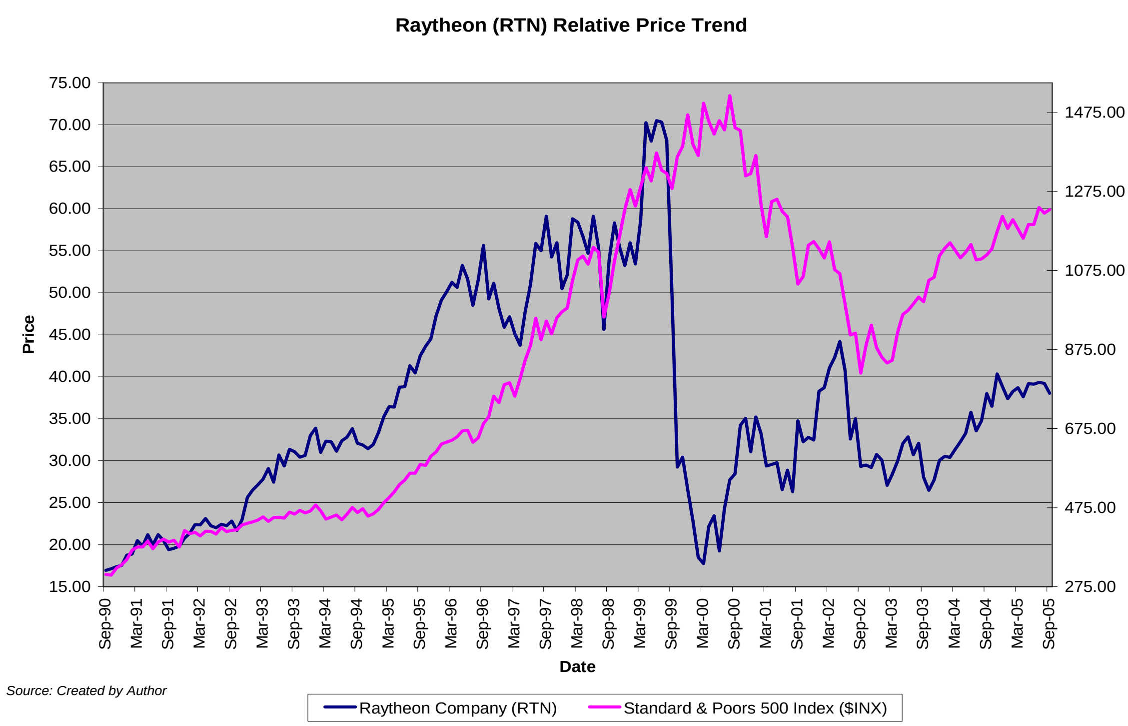

Figure 7. Raytheon (RTN) Relative Price Trend from 1990 – 2005

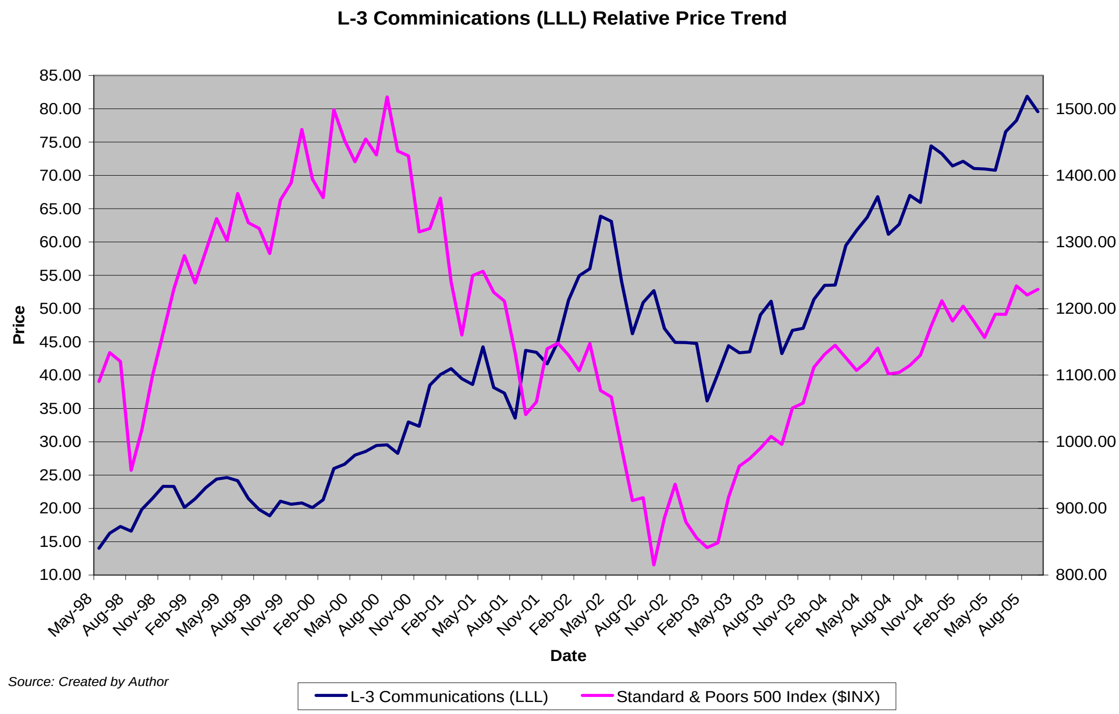

Figure 8. L-3 Communications (LLL) Relative Price Trend from 1990 – 2005

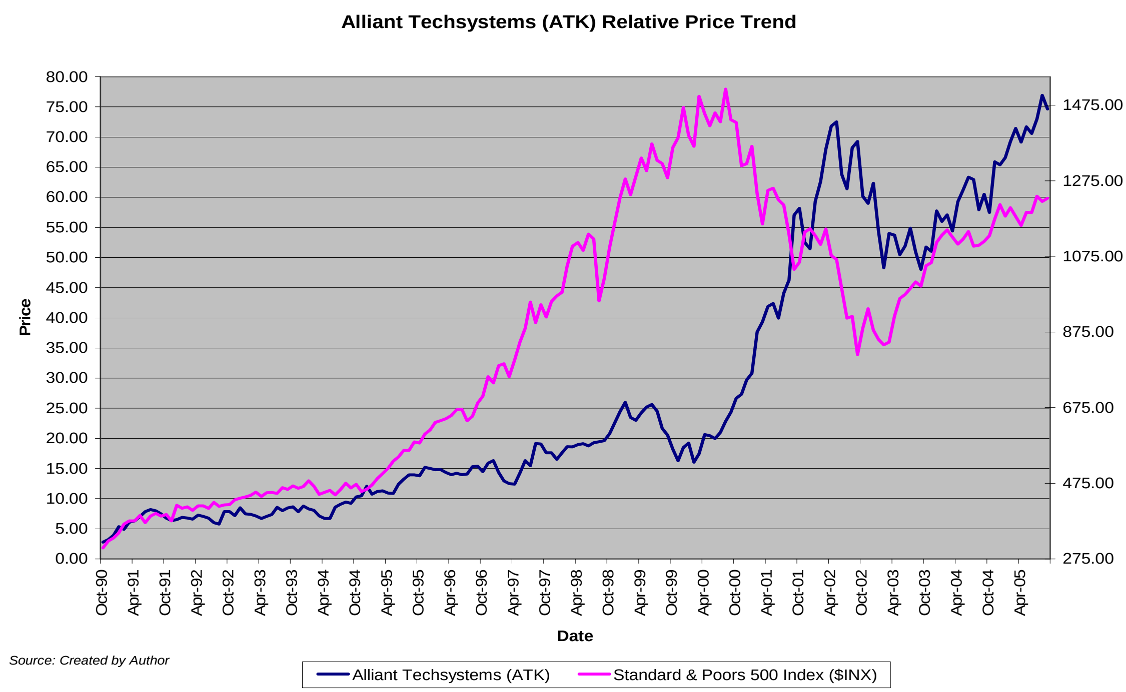

Figure 9. Alliant Techsystems (ATK) Relative Price Trend from 1990 – 2005

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